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ANS Executive Director: Dr. Ute Wartenberg

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Editor: Gary A. Trudgen

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We are pleased to feature an important paper in this issue by Dr. Brian Danforth on the St. Patrick coinage. For the first time, the questions concerning this coinage of who, when, where and why have been conclusively answered. Up to now, numismatists have only guessed as to the origin of this coinage. Nicholas Briot has been suggested as a candidate, dating the coinage to the early 1640s. Also, Lord Essex has been mentioned as sanctioning the coinage when he became Lord-Lieutenant for Ireland in 1672. Brian did not find evidence to support the possible involvement of either of these men.

This interesting coinage has a firm niche in colonial American numismatics, although it was originally produced for Ireland. St. Patrick copper pieces were brought to America by Mark Newbie in November 1681 and made legal tender by the General Assembly of New Jersey in May 1682. This coinage is known struck in copper, silver and gold. The copper specimens consist of two sizes; the smaller piece is often referred to as a farthing while the larger piece a halfpenny. The copper farthings are the most common of all the St. Patrick coinage. The silver specimens are farthing-sized and sometimes called shillings. There are two specimens known struck in gold but one is of questionable authenticity. Both are the size of a farthing and sometimes referred to as guineas. The controversial specimen was donated to the ANS (Accession No. 1988.166.1) by the Norweb family.

The St. Patrick coinage was the finest coinage produced for its time featuring two anti-counterfeiting devices; a brass insert and a reeded edge. Utilizing a technique common in archeology – dating material on the basis of available

technology – Brian has determined who had access to this technology. Then by studying the historical events of the period when this technology was available he has determined who had a need for this coinage and why.

I know you are anxious to learn who was responsible for the St. Patrick coinage, but I won't steal Brian's thunder. You must read his well researched and written paper to learn who produced this coinage, when and where the coinage was executed and why it was done.

Next, an interesting report by David Gladfelter is presented on a recently discovered colonial paper money hoard. The notes in this hoard are primarily from the Colony of New Jersey and span an issue period of 24 years, 1757 to 1781. Paper money hoards are rarer than "hard money" hoards and none of those reported by Q. David Bowers in his book titled *American Coin Treasures and Hoards* contained colonial era bills of credit, making this a significant find. The report includes two appendices, one containing a partial list of the hoard and the other illustrating one of the notes.

Finally in this issue there is a Technical Note by Byron K. Weston concerning counterfeit halfpence whose dies were corrected when the counterfeiters realized the Royal Mint had not continued the production of regal halfpence into the year 1776. Several date area enlargements are provided of 1775-dated halfpence where the last digit of the date clearly shows remnants of a 6 under the 5. The findings of this report are the result of research being conducted by an egroup established by Jim Spilman under the patronage of the Colonial Newsletter Foundation. The work of this egroup is ongoing with the intent of identifying and classifying the many groups of counterfeit halfpence that are extant today. The long-range objective of the egroup is to publish their work in book form.

In a cooperative effort between CNL and C4 (Colonial Coin Collectors Club), this issue is being mailed free of charge to C4 members who don't subscribe to CNL. For those CNL subscribers who aren't C4 members I would encourage you to consider becoming a member of C4 and, likewise, I would encourage those C4

members who don't subscribe to *CNL* to consider doing so.

For more information on C4, visit their website at www.colonialcoins.org/. You will find a mission statement along with information on how to become a member. They have a lending library where you can borrow hard-to-find publications relative to colonial numismatics. A quarterly club newsletter is published and mailed to members and an events calendar is provided on the website. To date, C4 has sponsored the publication of two books – one authored by Tony Carlotto on Vermont copper coins and the other authored by our own associate editor, Dr. Louis Jordan, on John Hull and the Massachusetts Mint. C4 is a very active organization holding an annual convention and auction, usually in November.

If you don't have Internet access, you may contact the C4 president, Ray Williams, for information concerning C4. Ray's mailing address is: 924 Norway Ave., Trenton, NJ 08629. His telephone number is: (609) 587-5929.

Gary Trudgen
gtrudgen@aol.com

ST. PATRICK COINAGE

by

Brian J. Danforth, Ph.D.; Slingerlands, NY

Part One: Peter Blondeau's Technology

St. Patrick coins make an intriguing addition to the American colonial copper series. The scarcity of written documentation as to their origin has engendered a mystery that has led to numerous speculative statements by numismatists, starting with their first reference as a circulating token. Yet, there has been a consistency in interpreting these coins as having a semi-official status. This viewpoint stems in part from the coins having a finely constructed reeded edge, which is a unique feature for tokens of that period.

What is known is that the coins circulated in Ireland in the latter part of the seventeenth century and during the early years of the eighteenth century. They were also current on the Isle of Man until they were demonetized in 1679 by an act of the Manx Parliament. Further, an Irish merchant named Mark Newbie (at times spelled Newby) acquired a quantity of them, which he brought with him when he immigrated to New Jersey in 1681. The following year, Newbie was elected to the West New Jersey Assembly. In that year, these coins were authorized to pass as legal tender.

There was a question in setting a base line for the number of St. Patrick coins Newbie brought to America. Walter Breen estimated the number at 14,400. David D. Gladfelter in his biography of Newbie considered that number to be a minimum. What is known is that Newbie's widow had to redeem £30 of these coppers. Utilizing this redemption figure as a basis, Philip Mossman calculated the minimum at 10,800 coins. Breen and Gladfelter based their number on 24 English halfpence to the shilling. But, Mossman points out that according to New Jersey money of account, it took 18 coppers to make a shilling. Thus, his figure is better suited for understanding the minimum number of St. Patrick coppers imported by Newbie.¹

What is not convincingly known about these coppers is what constitutes their mystery. The more pertinent unanswered questions pertain to when these coins were minted, who was involved in their minting and the historical context in which these coins were conceived and uttered. This article addresses these unanswered questions by approaching the origin of the St. Patrick coinage from a method common in archeology — dating material on the basis of available technology. This approach enables for the first time the documentation of the origin of the St. Patrick coinage with conclusive evidence.

Since the research findings are so significant, they are presented in two parts, thereby enabling a fuller presentation. Part One focuses on the technology needed to produce the St. Patrick coinage and the engineer whose secret innovations were central to this project. Part Two outlines the people involved in the production of these coins, setting them within a proper historical context that led to their semi-official utterance.

Introduction

The imagery depicted on St. Patrick coins opens the door to a wondrous array of various interpretations. The smaller coppers, which are traditionally referenced as farthings, illustrate this point most clearly. On the obverse, King David, so it is claimed, is depicted playing the harp, which as an instrument represents all things Irish. The king's portrait can be

interpreted as one of many different persons. For example, Breen thought that the head resembled Charles I. On the reverse stands St. Patrick as the very embodiment of the Kingdom of Ireland. It should be noted, however, that his attire is Episcopal rather than Roman Catholic. While it was acceptable to depict a popular historical figure, it would have been highly controversial to do so if he were cast in popish symbols. Next to him is the church as if portraying the people's faith that sustained them through wars and famines. These symbolic references clearly place this coinage within an Irish setting.

It should be noted that there is a current debate among numismatists as to setting the denominations for the St. Patrick coppers. By common practice, the smaller coin is referenced as a farthing and the larger coin as a halfpenny. Yet, size and weight differentials do not support this thesis. It is also a possibility, as some writers have pointed out, that both coppers are of the same denomination but represent different varieties. For the convenience of the reader, I refer herein to these two varieties as farthings and halfpence although the larger copper may have been an odd denomination as pointed out in Part Two of this article.

The mint date for the St. Patrick series has been speculatively proposed as one of two distinct eras, being either 1641-1642 or 1672-1674. This divergence results from each interpreter viewing similar historical events differently due to the lack of sufficient written records to adequately resolve the issue. Support for each era is outlined as follows:

(a) The first time frame as advocated by Breen and others is appealing because of its association with the English Civil War that pitted the Catholic forces of Charles I against Oliver Cromwell's Protestant army for control of Ireland. Here, Breen stated that the coins were struck at the Tower Mint to pay the royalist troops.² James Simon, a noted eighteenth century Irish numismatist, promoted the same period but allied the coins with the 1642 Order of the General Assembly of Kilkenny, Ireland that stated:

That coin and plate shall be raised and established in this kingdom...and that there shall forthwith be coined the sum of four thousand pounds, to pass current in this kingdom, according to a proclamation or act published by direction of this assembly in the city of Kilkenny, and...an institution and order of knighthood, concerning the honour of St. Patrick, and the glory of this kingdom...³



Figure 1: Obverse and reverse of the smaller St. Patrick copper which is often referred to as a farthing. (*Shown 2X actual size.*)

Since this authority to coin was given in the same text as the establishment of an Order of St. Patrick, Simon considered this to be convincing evidence that 1642 was the mint date;

(b) For the later era, 1678 was initially offered as the mint date. Philip Nelson promoted this date due to the circulation of St. Patrick coins on the Isle of Man.⁴ As noted by one numismatist: "The style of work...shows that it is of a much later period."⁵ However, the discovery of the yacht *Mary* in the 1970s, which sank in foggy weather in 1675 on its voyage from Dublin to England, proved that the St. Patrick coins were minted no later than that date. Found among the debris of the wreck where 23 mariners drowned were 273 coins, including two St. Patrick farthings. This discovery led to pushing the mint date to before the sinking of the yacht *Mary* and into the 1672 to 1674 era. Supporting this period is the recovery of a small hoard of coppers in Killaraght, County Sligo, Ireland. Here, two St. Patrick farthings were discovered in context with authorized coppers from the 1680s. This is consistent with the discovery of other St. Patrick coins in similar contextual circumstances.⁶

In a purely speculative vein, various persons have been referenced as being involved in producing the St. Patrick coinage. Breen offered Nicholas Briot as one potential candidate. As an engraver at the London Tower Mint that saw "money of necessity" issued throughout the land during the Civil War, Briot meshed with Breen dating the coins to the early 1640s. Supporting evidence for this interpretation is a limited punchlink connection between some St. Patrick coins and those produced by Briot while at the Edinburgh Mint. While such a connection is important to note, it is not confirmation of Briot's involvement since most of his equipment was sold-off and made available to others to use as they saw fit.⁷ Lord Essex has also been mentioned as sanctioning the St. Patrick coinage upon becoming the new Lord-Lieutenant for Ireland in 1672. However, although he was involved in evaluating various proposals to produce coppers for Ireland, the historical record shows that he seriously considered only two such proposals, which were not presented to him until 1675 with a proposed mint date one year after the sinking of the yacht *Mary*. Thus, Briot's and Essex's involvement in the effort to produce the St. Patrick series is not sustainable.⁸

A more conclusive method to answer when and whom is to avoid reliance on reference points that are open to a multiplicity of interpretations. Such an alternative approach is offered herein. Through an examination of the available technology of the 1600s, the mint date for the St. Patrick coins can be derived at based on the technology needed to produce in an economical fashion small denominational coins similar to the St. Patrick coppers. Upon dating the technology, the next step is to discern who had access to this technology and was this person the only one or one among many who had such access. Upon determining who had access to the technology, the final point to discern is if these facts fit within a proper historical context to ensure circulation.

In the realm of milling coins in the seventeenth century, there was only one available method that could technologically produce the St. Patrick coinage in an affordable manner. This method was invented by Peter Blondeau who came to London from the Paris Mint to modernize the operations of England's Tower Mint. Further, by keeping his method a secret as per terms of a royal patent, he was the only person who had access to it. Finally, there was only a small window of opportunity in which Blondeau could have produced the coins in order to ensure their circulation. All of these diverse components merge into the period between 1667 and 1669, during the closing years of the administration of Lord Ormond as Lord-Lieutenant for Ireland. Here, Ormond sought the minting of coppers as a means to pay the army during a fiscal crisis that gripped the Kingdom at that time.

Minting Technology and Peter Blondeau

Coins throughout the Middle Ages were stamped by a non-mechanized process that used planchets of inconsistent shapes. These hammered coins could be easily clipped and counterfeited. As the number of coins in circulation mounted during the Renaissance, the concern with debased money increased. This constituted a problem for governments all over Europe.

The first major step in protecting national coinage was the use of a screw press. This procedure began with the making of Papal Bullae for Pope Julius (1503 - 1513). The process was improved upon by Leonardo de Vinci when he joined the Rome Mint in 1514 and invented the collar to contain metal spread. Thereafter, technicians were able to produce a round coin with the desired die impression contained within its border. In addition to improving the quality and appearance of coins, it made them more difficult to counterfeit since the cost of a screw press exceeded the financial means of the majority of persons who were tempted to tamper with regal coins.⁹

England, under Elizabeth I, experimented with milled coin production. In 1560, Eloy Mestrell, a former employee at the Paris Mint, was retained to establish a small operation within the Tower Mint to manufacture coins utilizing a screw press. Although his coins were superior to hammered coins, he was unable to overcome opposition from other workers. Of course, he did compromise his position upon being discovered to be a counterfeiter for which he was later hanged. For the remainder of that century, England failed to adopt any further steps in mechanizing its coining operations.¹⁰

The next step came in the early 1600s with the invention of edging machines specifically designed to lessen clipping and counterfeiting of higher valued coins. First came a process of placing a reeded edge on a coin. Shortly thereafter came the invention of a method to inscribe the side of a coin with letters. To accomplish these tasks, a two-step process was introduced in manufacturing coins whereby coins were reeded or inscribed in one step and then processed in a screw press for stamping in a second step. The added cost of this procedure was justifiable because it protected national coinage. The only drawback was that minor bullion coins and coppers were deemed to be either too thin for the application of the new technology or their intrinsic value was deemed not high enough to justify the added cost. In spite of this limitation, the advantages presented by these inventions were sufficient enough that European officials started to adopt the new technology.¹¹

In the 1630s, England again experimented with the adoption of screw presses to manufacture its coinage. As in the past, authorities turned to the innovative work that was then being carried out at the Paris Mint. There, Briot's work in advancing France's coining operations held promise of what might be achieved in England. In coming to London, his endeavors at the Tower Mint came to exemplify the enhanced quality that could be achieved if the country switched to a more modern means of producing its coinage. But, his methods were not as effective as the hammer process when it came to manufacturing large quantities of coins, which limited his applications and the number of coins that he produced during the reign of Charles I.¹²

In spite of the drawbacks to Briot's methods, he was noted for approaching his tasks through innovative means. One key technique was his use of a slightly heavier than normal screw press to enhance the quality of his work. By this means, he was able to imprint a finely executed border on his coins. Although never adopted at the Tower Mint, this is a significant point in the unfolding history of the St. Patrick series for it revealed what could be accomplished when a heavier screw press caused more pressure that led to additional metal flow to the perimeter of a coin. When Blondeau dramatically increased the weight of the screw press, he could accomplish even more metal flow, which eventually led to his ability to install a reeded edge on his coins. In this manner, Briot's work constitutes an antecedent for the St. Patrick series as manufactured by Blondeau.¹³

It is significant to note that Blondeau trained under Briot at the Paris Mint. Having witnessed the effects that could be achieved in using slightly heavier screw presses, it was Blondeau who took the next step in advancing coining technology through his development of very large screw presses that would be needed to produce significant metal flow. This concept along with Blondeau's other innovations laid the groundwork for his later perfection of coin edging, which is a hallmark of the St. Patrick series.¹⁴

In 1639, France decided to end its long tradition of producing coins by hammer. In the next few years, the Paris Mint switched to the screw press method primarily out of necessity since instances of clipping and counterfeiting its bullion coins had endangered the national coinage. Blondeau, a skilled engineer at the Paris Mint, participated in this mechanization process that transformed French money. A decade later, England faced the same crisis that had confronted France. In response, it was decided to make technological changes at the Tower Mint. To accomplish this task, Blondeau was invited to England to assist in adopting improvements similar to those in operation at the Paris Mint.¹⁵

Unknown at this juncture was the fact that Blondeau had invented a new method of treating the edge of bullion coins with letters or graining. This was a one-step process that would save time and money. Further, his invention enabled thinner coins to receive this relatively new anti-counterfeiting technology, affecting a larger array of coins than were presently treated. In coming to London, Blondeau hoped that his new inventions would be adopted by the English although he did not yet announce that he had discovered a new minting technique.¹⁶

After coming to England in 1649, Blondeau produced several specimens to show authorities what could be achieved if the Tower Mint were modernized. The Mint Committee reported in 1651 that "his patterns of coin are better than the present fashion."¹⁷ Thereafter, however, the authorities were slow to act, but mint workers were not. Fearing the loss of their jobs, the workers attacked Blondeau, accusing him of treason because he made specimens that duplicated the design of Commonwealth coinage without direct permission and struck some of them on copper that he silvered over. This led to the charge that he was a counterfeiter. As one mint accuser declared:

...said Blondeau did falsly (*sic*) and traiterously (*sic*) make...of the just weight and motto of the Commonwealths (*sic*) money contrary to the Laws and Statutes of this Nation, having fraudulently silvered over the said Plates with silver to abuse ignorant people; the said cheat was discovered by the most knowing and right honorable gentlemen Master Allen, and Master Cornelius Holland... That the said Pet. Blondeau had committed Treason...for which fact the said Peter Blondeau ought to suffer as a Traytor (*sic*) by being hanged drawn and quartered...¹⁸

Mint authorities did not respond to these charges. However, they did concede to the demand that a competitive trial take place between Blondeau and a representative of the workers, being David Ramage. Each competitor was instructed to make coins and present them to authorities. Ramage produced a limited selection of "big pieces of silver stuffed within with copper" while Blondeau produced "300 pieces, from half-crowns of the ordinary weight and bigness, som (*sic*) shillings, sixpences, and som (*sic*) Gold pieces."¹⁹

Blondeau's results showed that his methods were more suited to mechanizing the mint. Even Ramage admitted that he had difficulty in preparing his specimens and that he had not fully achieved the desired results, but he assured authorities that he would be successful if he had more time. Seizing this point, the workers demanded that they be given additional time to solve the obstacles that stood in their way of making equipment that would replicate Blondeau's results. At this juncture, Blondeau announced that what he had to offer no other engineer could provide. Further, he proclaimed that he had invented a new technology unlike any known and a secret kept solely by him. In his Memorandum of 1653, he described the new technology as follows:

...a new Invention, not yet practiced in any State of the World; the which will prevent counterfeiting, casting, washing and clipping...and will cost no more than the ordinarie unequal Coyn, which is used...As to the way of remedying those inconveniences...by the way propounded by the said Blondeau, by marking the coyn, not only on both the flat sides, but also upon the thickness or the edges...that it cannot bee so counterfeited. Whereupon...they could never finde (*sic*) out the said new Invention for coyning...²⁰

Blondeau's unrevealed secret was that he had invented an improved method for milling coins. The hallmarks of his process were that he could inscribe or grain thinner coins than the existing technology could achieve and that he could strike all three sides of a coin at the same time, thereby eliminating the need for the more costly two-step process where coins were stamped and inscribed or edged at different stages. As a further cost saving technique, he could achieve these desired results with a singular collar rather than using the existing and more expensive segmented collar. For this procedure, he had developed a thin metal insert to place against the inner wall of the collar. This movable insert was perforated to produce lettering or had ridges to create graining, thereby allowing metal flow caused by the pressure of the screw press to construct lettering or graining. But, the existing screw press had to be remodeled in order to create sufficient metal flow to fill the cavities of the metal inserts. Here, Blondeau enlarged the current screw press, increasing its weight dramatically up to 2000 pounds in order to generate the necessary downward pressure to achieve enhanced metal flow. Since his edge making capability was deemed far superior to existing procedures, mint authorities seriously considered Blondeau's new technology. But, the workers again attacked Blondeau, stating that his new technology was nothing more than a new twist on existing methods that were already well known and if they were granted the additional time as requested that they would soon be able to produce the same results as Blondeau. The mint authorities again delayed their decision.²¹

Blondeau in frustration publicly attacked the workers. He claimed that the reason for opposing the modernization of the coining process was that the workers unduly profited from existing conditions. In a pamphlet of 1653, he stated his reasoning as follows:

...the money coyned with the hammer, cannot bee made exactly round nor equal in weight and bigness...Which inequality occasions several Gold-smiths and others, who receiv (*sic*) the money from the mint, to cull or pick out the heaviest pieces to melt them; and after them, others do again cull or pick out the heaviest of them that are left, to transport them beyond the Seas; so that only the light...monie remain's (*sic*) with the State, which turn's to the great ruine (*sic*) and destruction of Commerce...And that is the thing... which is the cause, that by themselves and by their friends, they make use of all their joynt (*sic*) power...to hinder the changing of the way of coyning the money...²²

The workers retaliated. With Thomas Violet as their spokesman, they published a pamphlet that accused Blondeau of libel. As Violet stated:

Peter Blondeau...intends maliciously to sandall (*sic*) Us the Corporation of Moniers, of the Commonwealth of England: But also most falsly (*sic*) to imprint in the hearts and mindes (*sic*) of all People...false and scandalous Libells (*sic*)...I never met with so imprudent a lying fellow in my life as this Frenchman is...²³

At one point, in frustration, Blondeau contemplated leaving England. Toward this end, he wrote to the Protector's Council outlining their financial obligations to him and requesting:

...to consider speedily a petition referenced to them...and the annexed orders, and according to their tenor, to order petitioner to be employed in the mint, or dismissed and indemnified for his charges and losses, and his expenses in making patterns...²⁴

Blondeau stayed. Between 1654 and 1655 he was assigned to explore the possibility of re-establishing the Irish Mint. Toward this end, he visited Ireland and undertook initial steps in “preparing engines” for this project. Although nothing came of this exploratory venture, it provided him with an income. Later, he was authorized to produce a limited quantity of milled bullion coins, employing his technology in a modified fashion. In order to ensure the secrecy of his inventions, he established his operations at a site separate from the Tower Mint at a property he occupied in London on the Strand called Drury House. There, his methods remained a secret as each of his employees swore an oath of confidentiality. As for mint workers, they retained the hammer process for producing the bulk of the coins issued during the Commonwealth era. Eventually, the failure to fully modernize the mint was a disappointment to Blondeau and in 1659 he returned to France.²⁵

Second Attempt to Modernize the Tower Mint

In 1660, the monarchy was restored in England. As for the nation's money, Charles II focused on two objectives. The first was to mint coins that depicted his reign as quickly as possible. The second was to demonetize Oliver Cromwell's coins as soon as practical, which necessitated producing more coins as quickly as possible. The continuation of the hammer process was deemed the most expedient way to produce the maximum number of coins the quickest since any change in operations at the mint would have caused delays. Unfortunately, the increased production of hammered bullion coins — no official copper coins were minted for circulation during the Commonwealth era or the first twelve years of the reign of Charles II — led to a dramatic increase in clipping activity. The rate of debasing the new coinage was accelerating at such a pace that mint authorities feared that the national coinage would shortly face the same damaging fate that had befallen France prior to its decision to modernize its operations in 1639.

A remedy was needed and Deputy Master-Worker Henry Slingsby, who had established a good acquaintance with Blondeau in the 1650s, suggested that the Frenchman be asked to return to England. In 1661, Blondeau arrived in London with the expectation that this time the mint would be fully modernized. The following year, Blondeau and Slingsby successfully planned the overhaul of the mint. In order to avert the problems that he had encountered in the 1650s, Blondeau received a patent with three significant clauses. First, he was granted the exclusive right to employ his new inventions on all bullion coins of sixpence or more for a term of 21 years. Second, no one other than Blondeau could employ his techniques in producing farthings or other base metal coppers. This sole right was granted to him for a period of 14 years. Thirdly, he was granted the complete right to protect the secrecy of his technology and those employed in his edging and graining procedures were to be sworn to uphold this secrecy. Accordingly, Blondeau was charged with the responsibility of making letters or graining on coins.²⁶

To accomplish its goals, the entire mint had to be redesigned. The old Irish Mint was appropriated. A large hall that had been assigned to Sir Thomas Armstrong to mint copper farthings for Ireland was taken. The Assay Master's garden was enclosed to house the horse driven rolling mills needed to properly size metal for planchet production and Blondeau was assigned a separate area within the mint for his edging operations in order to avoid the curious eyes of other workers. The cost of this modernizing effort totaled £2,709. The inventory of purchases included: £905 for the tools and engines supplied by Blondeau; £790 for carpenters to construct the various mills, rooms and equipment; £765 for the masons, plumbers and other mechanics and for associated materials; £83 for furnaces and bellows; £70 for the smith and tools and engines; £68 for horse mills; and £28 for horses.²⁷

Samuel Pepys, the famous diarist, visited the mint in 1663. He marveled at the new technological advances shown him that day. He was informed of the anti-counterfeiting technology that the “Frenchman” diligently protected as a secret. It is apparent that the mint at this juncture employed

several techniques in edge making. Blondeau's method of inscribing a coin's edge with letters was assigned to thick bullion coins. As for edge graining, two different methods were used — the existing two-step process and Blondeau's new one-step method. Even the less effective segmented collar was initially used. In the rush to modernize its procedures, the mint employed an array of methods to produce as many coins as quickly as possible. Given that Blondeau's inventions were more economical, they were adopted over time as the chief means of protecting the national coinage.²⁸

Between 1662 and 1664, Blondeau focused on producing the guinea, crown, half-crown and shilling. This was an impressive start for a newly installed production line, especially given the radically different technology with which workers now had to contend. Later, the five guinea was introduced. This coin has been described as a spectacular example of his machine-made coinage.²⁹ During this period of transition at the mint, Blondeau must have experienced some difficulty being a Frenchman supervising Englishmen. In an attempt to resolve this tension, he requested "a warrant appointing him a free denizen, in order to enable him better to govern his workmen" which was quickly approved. An addendum to this warrant granted him "leave to exercise any trade within the kingdom" which gave him license to undertake projects outside the mint, which would prove important to a future maker of tokens.³⁰

Although the mint in the 1660s focused on bullion coin production, it was recognized that small change was needed for conducting ordinary daily transactions. Due to the disappearance of the Commonwealth's silver halfpenny and the failure to issue any official coppers in decades, an array of tokens was issued by local merchants and town corporations as early as 1649 in England and 1653 in Ireland. While ordinary persons welcomed these tokens, the method for using them was problematic. For example, the use of a token within the region of its issue was generally accepted. But, if one were to travel to another region, new tokens had to be acquired. Exchangers in each locale maintained an inventory of the different tokens in use. They served the additional function of exchanging tokens for official bullion coins if the need arose. Generally, shop and tavern keepers maintained sorting trays so that when a sufficient number of local tokens had been accumulated, they would be redeemed from the nearby issuer. The most serious drawback to this system was that the intrinsic value of these base metal coins, as could be derived from their weight, bore little resemblance to their ascribed denomination.³¹

Confusion and difficulties accompanied the use of tokens. What was needed was a duly authorized small denominational coin for use throughout the nation. As one pamphleteer pronounced in support of copper farthings:

...it is as clear as the sun...the Poor's misery, and the Commons discontent, are all foulded (*sic*) up in the non-allowance of State Farthings; the Poor crying out for mercy, the Commons for redress; and this insuffable (*sic*) abuse cannot easily be corrected, until it shall please...to pass an Order for the allowance of State Farthings...³²

To illustrate the potential use of coppers, several proposals were sent to authorities. These initiatives were undertaken by private individuals who saw that a need existed for small change and that a profit could be derived from the enterprise. A notable proposal was presented by Thomas Violet, an old foe of Blondeau's from the 1650s. It is important to note that Violet stated that the copper for making these coins would be obtained from Sweden since England could not supply the necessary metal due to the basic collapse of the copper industry at home. In response, the mint authorized the preparation of a Pattern farthing in 1665. Its detail reflected the quality of craftsmanship that could be achieved with the new technology employed by Blondeau. Further, it had a vertical reeded edge as a protection against counterfeiting, which would have addressed the excessive abuses that had occurred with farthings under Charles I.³³

It was not until 1672 that an official copper coinage was issued for England and not until 1680 that this problem was addressed in Ireland with the Knox Patent. In the interim, ordinary persons had to contend with an array of lightweight coppers produced by numerous merchants and towns that had little value beyond a five mile radius of their issuance. Hardest affected by this problem was Ireland, which was awash with debased coinage and England's lightweight rejects. While the English needed a national copper coinage, the Irish were desperate for it. Into this void, the St. Patrick coppers appeared.

Technology and the Origins of St. Patrick Coinage

Research methods used by archeologists in dating material generally start with an inspection to determine the technology that was needed to make an object. Then, they date the object based upon the time frame in which that technology was available. This approach is not employed by numismatists for American colonial coins because the historical record is sufficient to determine the time frame for the minting and issuing of coins. However, for the St. Patrick coins, the written record is limited and as applied by prior writers is often contradictory, which does not ensure a satisfactory determination as to when these coins were minted. Thus, the archeological approach is used herein to resolve the issue.

In examining the St. Patrick coinage, we know that they were produced no later than 1675 because of the discovery of two specimens from the yacht *Mary* that sank that year. The end date, therefore, is an established fact. From there, the coin itself gives telltale signs of the methods of technology used in its manufacture. Here, two specific hallmarks distinguish this coin from all other English and Irish copper coins made prior to 1675. First, the coin's edge is vertically reeded by means of a mechanical process that could accomplish this task with precision on a thin coin. Second, the technology employed was able to produce the reeded edge feature at an affordable production cost, which is attested to by the coin's successful circulation.

Prior to 1675, there were only two methods of placing a reeded edge on a coin. One was the typical edging machine that ran a planchet between two grooved parallel bars and then sent it on to be stamped by dies in a screw press. But, this process was neither suited to thin coins nor economically feasible for low valued coins such as those made of copper. As William Wood illustrated 50 years later, the two-step procedure of reeding the edge of coppers placed such a limitation on profits to the patentee that he did not use this feature on his Hibernia coins in spite of claims from his opponents that such an anti-counterfeiting measure would aid in his money being more agreeable. The other method was the one-step process that had been invented by Blondeau. This process would work on thin coins. Blondeau proved this point when he produced a circulating reeded edge sixpence of a size similar to the St. Patrick coins during the Commonwealth era. More importantly, Blondeau's technology ensured affordability on low-valued coppers.³⁴

The evidence that a separate edging machine was not used on the St. Patrick coinage is presented by the coin itself. Coins that passed through two parallel bars for graining often reveal the common side effect of an overlap or double graining at two opposite points on the coin. This feature results from slippage as the coin is processed. This is a telltale sign of a two-step process and is noticeable on bullion coins produced at the mint when a two-step edging process was employed. With the advent of Blondeau's one-step techniques, this problem is eliminated. As for the St. Patrick coppers, there is no indication of overlapping on the reeded edge, illustrating the point that these coins were not processed between two parallel bars. And, Blondeau had sole control over the one-step process as protected by his patent.³⁵

Blondeau achieved his edge graining by means of improving existing technology. His approach was to strike all three sides of a coin simultaneously, thereby creating a reeded edged coin in a

single step. In order to achieve this effect, he invented the concept of tooling a thin metal grooved strip to line the collar. An alternative approach would have been to create the graining by means of a segmented collar whereby the collar is divided into two parts with the upper and lower die each having one-half of the grooved element needed to produce a reeded edge. This approach was used briefly at the mint, but the procedure left a distinct line of metal circumscribing the coin where the dies met. In contrast, Blondeau's procedure that employed a modified singular collar left no linear marks on the side of the coin. In observing the St. Patrick coins, it is noted that the edge of the coin is free of circumferential markings, confirming the use of a singular collar. Next, Blondeau had to create another modification to the then existing screw press used in the coining process. Here, he dramatically increased the pressure being applied to a planchet in order to create sufficient metal flow to fill the grooves of the metal insert. In order to accomplish this task, the weight of the screw press had to be significantly increased. In describing this modification, in somewhat vague terms in order not to fully divulge his techniques, he stated:

...the Engines wherewith the brims are marked, may be kept secret among few men, who shall be sworn to keep it, and not to reveal it to anie (*sic*)... the Engines that are used therein are so big and heavie (*sic*), being between 1 and 2000 l. weight...they were put to mark all the pieces at one stroke, as in the said *Blondeau's* invention...it is impossible to doe (*sic*) it without strong and heavie Engines... The monie coined merely at the Mill can bee made with very small Engines, but that which is proposed by the said *Blondeau*, cannot bee coined without a great many big and heavie Engines...³⁶

Confirming evidence of Blondeau's involvement is gleaned from an inventory of his personal property at the time of his death in 1672. Specifically, he owned five screw presses that he had acquired from Poland for making farthings. Given the tradition at the mint in the 1650s and 1660s for employees to mint tokens for merchants and town corporations for their private advantage, his possession of presses for making farthings is very indicative that he was involved in a venture that produced tokens. By owning five presses, the venture had to be sizeable enough to justify the cost of acquiring so many presses at a time when tokens issued by merchants and others were of low mintage. Since Blondeau probably acquired one or more of these presses as early as 1664, it can be reasonably assumed that he was already in the token manufacturing business by the time Ormond was looking for an engineer to manufacture coppers for Ireland.³⁷

With Blondeau as the identified engineer for producing the St. Patrick coinage, the final question to be addressed is whether he had sole access to this technology. As per the terms of his patent of 1662, he was solely authorized by the crown to grain the edge of coins and enjoyed the privilege of keeping his techniques a secret. At this he must have been successful. In 1679, the French Minister of Finance in writing to the French Ambassador in London revealed that Blondeau's secret technology had been recently discovered. Shortly thereafter, the Paris Mint was in possession of the secret. In the ensuing years, France under the direction of Jean Castaing improved Blondeau's innovations, placing the French again in the forefront of coining technology.³⁸

Overall, the St. Patrick series presents a sharp contrast to the other tokens of the era, which often lacked the quality of craftsmanship and professionalism that is so evident on Blondeau's coppers. Local merchant tokens were generally produced by artisans who in the tradition of Anglo-Saxon times traveled from town to town applying their trade. In some instances, these artisans created interestingly shaped tokens such as the heart coins that stand out as a fascinating example of this enterprise. Town or corporation tokens were generally produced at a higher standard. Here, contracts were generally issued with London die makers for the production of more professional looking tokens. Yet, none of these tokens can compare to the St. Patrick coppers, which were produced by a mechanical process of Blondeau's invention as rendered by experts in the business of coin manufacturing.³⁹

Technical Difficulties & Resolution

There is a confession that Blondeau made prior to his death in discussing problems that he encountered with his inventions. Significantly, he referenced an unidentified type of coin that he had difficulty in producing. Specifically, he mentioned that in producing this type of coin there had been a problem in properly aligning the dies. As a result, when the obverse and reverse dies met in the stamping process, one of the dies had a tendency to hit the collar whenever the dies were

not in perfect alignment. Blondeau's problem would have produced an error coin in that one of the sides of the coin so struck would be slightly off centered. Another result would be that by repeatedly hitting the collar, the dies would fail sooner than ordinarily expected. This problem would have necessitated the use of extra dies in order to produce this coin type, which would have resulted in a noticeable disparity between the number of observable varieties and the number of coins produced that survived to the present.⁴⁰

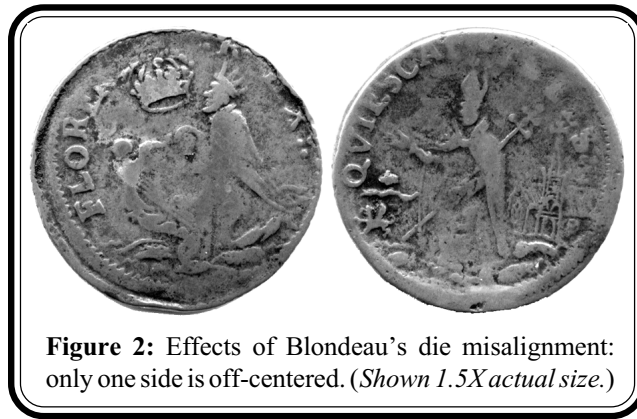


Figure 2: Effects of Blondeau's die misalignment: only one side is off-centered. (Shown 1.5X actual size.)

In examining a random sample of photographs assembled for John Griffie's forthcoming book on attributions for the St. Patrick coinage, Blondeau's description of his problem correlates with the physical evidence. For an example of this problem see Figure 2 that contrasts the obverse and reverse of a St. Patrick copper, showing the effects of die misalignment.

Reviewing with Stan Stevens a random sampling of photographs taken by Bill Noyes for Griffie's book on attribution, the following was observed as expressed in Table I below:

Coin Type	% Off-centered		
	Both Sides	Obverse	Reverse
Farthings (54)	9%	2%	4%
Halfpence (16)	0%	0%	0%
Shillings (2)	100%	0%	0%

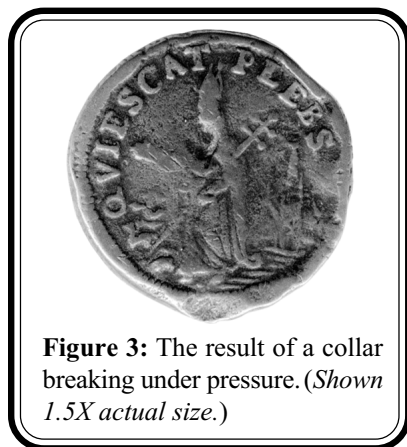
Table I: St. Patrick Coinage. Farthings are the smaller diameter copper coins while the larger diameter copper coins are known as halfpence. The shillings are farthing-sized coins struck on silver planchets. Random sample size of 72 coins.⁴¹

It is not uncommon to have both sides of a coin slightly off-centered since planchets of this era lacked consistent sizing. In the case of the smaller St. Patrick coppers, there is a common diameter differential of about 10 percent.⁴² Since blanks were placed within a collar with a fixed diameter, one could expect that occasionally both sides would be slightly off-centered as the above table illustrates. Less common was the error appearing on only one side of the coin. This

type of error stemmed from a misalignment of the dies. Here, the hammer die (top) in its descent, if not properly aligned, would hit the collar of the anvil die (bottom), resulting in a portion of the strike being partly off the coin on one side only. The appearance of this error on the smaller St. Patrick coppers corresponds with Blondeau's description of the problem he experienced with his technology.

The die alignment problem that Blondeau experienced on the St. Patrick coinage is consistent with the generic difficulties he encountered in handling small planchets. When England authorized the minting of small silver coins, starting in 1668 with the twopence, Blondeau had sufficient difficulty with the coin that his production allowance was increased above established limits.⁴³ With larger planchets, his technology is not noted as having similar difficulties and stated allowances were not affected. This differential is illustrated in Table I where the random sample does not reveal any issue pertaining to larger planchets used for the St. Patrick series. While die misalignment can occur during the manufacture of any coin series, it is the pattern of its one-sided appearance on the smaller St. Patrick coppers that dovetails with the minting history of this particular series.

Blondeau must have attempted to address this problem for in his will he stipulated that his beneficiaries must pay Peter la Castill £20 per year for his labor in the edge-making process. Such compensation would have been applicable only for work done on non-mint projects. Thus, Castill was being compensated for improving Blondeau's method as applicable to coins produced outside of the Tower Mint.⁴⁴



Adding to the problem was that dies were also being destroyed faster than normal due to excess pressure. This problem was the result of Blondeau's one-step process of striking all three sides of a coin at once, as on the St. Patrick coinage, in order to produce a reeded edge. In using heavier than normal screw presses to create sufficient metal flow to fill the grooves of the metal insert along the collar wall at times led to breaking the collar and the outflow of metal as illustrated in Figure 3.

Die destruction was a problem as it ran counter to the necessity to contain costs to ensure profitability. It is known that Blondeau addressed these problems at the mint for the production of regal bullion coins that employed his one-step technology. In this instance, he relied upon the newly

appointed die maker, John Roettier from Flanders, and his newly created hardened dies that could withstand the pressures of heavy screw presses. The key person in this process was Roettier's smith, Peter Johnson, who was responsible for creating a new means to harden the dies. Although the rate of die destruction was lessened due to Johnson's process, the issue was not resolved. Also contributing to lessen the expense of replacing dies was the adoption of new methods for engraving dies. Formally, each die created was used directly in the striking process. Thomas Simon, another die maker who worked closely with Blondeau in the 1650s, introduced the matrix method of die making whereby a master die was created not to be used in striking coins but rather to impress new dies to replace those no longer serviceable. The matrix system introduced by Simon pertained to the central figures on coins. And, being a new method, it was not consistently employed at the mint. Since this innovation was used on the bullion coins that Blondeau produced in secrecy at the mint, he was well aware of their advantages. Thus, it is reasonable to assume that he employed these innovations in making his St. Patrick coppers in order to reduce costs. Given that a common token die cost five shillings to make and the dies for the St. Patrick coins, due to their detailed design, would have cost more, it would have been important to adopt every available technique in order to ensure the economic viability of his copper project.⁴⁵

The problems that Blondeau encountered with his new technology necessitated making more dies than would have otherwise been necessary for the St. Patrick series project. This would account for the inordinate number of die varieties in the St. Patrick series in comparison to the number of coins that have survived to the present day. As of the writing of this article, Griffie has identified 234 different varieties for these coins.⁴⁶

As the above information confirms, only Blondeau possessed the necessary technology needed to produce economically the St. Patrick coins with their anti-counterfeiting reeded edge. Further, Blondeau kept his inventions secret as protected per terms of a royal patent granted solely to him. And prior to 1675, no other coppers were issued for general circulation in either England or Ireland with a reeded edge, for none could have been minted economically without using his technology. With Blondeau identified as the only person who had the technology to produce economically the thin and low valued St. Patrick coinage, the next questions to be answered are when were these coins made and what was the historical context in which they were conceived. Information pertaining to these points shall be presented in Part Two of this paper.

Part One Conclusion

In searching for the origin of the St. Patrick coinage, the approach employed herein has been the method used by archeologists in examining historic objects. By discerning the technology that was necessary to produce the item being studied, the period of its manufacture can be obtained. For the St. Patrick series, the technology used to produce the coin's reeded edge was unique for circulating coppers made prior to 1675.

Based upon the technology of the period, the only engineer who was able to produce the St. Patrick coins was Peter Blondeau. Although he first came to the Tower Mint in 1649, his new inventions were not fully implemented until the mint decided to modernize its operations in 1662. In this undertaking, Blondeau was assigned the duty of edge making. In this task, he was granted a royal patent that protected his inventions and granted him the exclusive right to employ his new methods on all coins produced at the mint that were to have either an inscribed or grained edge, which became the hallmark for Charles II bullion coins. His techniques remained a secret until well after the discovery of St. Patrick farthings on the yacht *Mary* in 1675.

As with all mechanical innovations, Blondeau experienced several problems that needed to be resolved in order to perfect his new technology. For the most part, he was able to successfully address these obstacles. The significant exception was the die alignment problem that he experienced in producing the St. Patrick coinage that resulted in one side being slightly off-centered. This error characterizes the coining process that identifies Blondeau's technology as the source for producing the St. Patrick coppers. Fortunately, Blondeau was able to lessen the fiscal impact of this problem, thereby allowing him to maintain an affordable coining process for these coppers.

Part Two will discuss the historical context in which these coins were produced. Here, the participation of influential men combined with the events of the 1660s led to the creation of a highly tooled coin to address Ireland's monetary needs. Without the participation of such men, these coins would not have circulated widely. Further, the St. Patrick coinage would not have achieved the semi-official status to which numismatists have alluded over the years.

Part Two: Lord Ormond's National Coinage

This is the second installment in presenting new research conclusions pertaining to the St. Patrick coinage. Part One outlined the technological advances invented by Peter Blondeau that made it possible to produce these coins. His innovations were kept secret and were protected by a royal patent granted to him in 1662 ensuring that only he had access to the necessary technology that was needed for edge graining in a one-step process. Further, his technology left certain hallmarks on the coins that correlate to specific technical issues he encountered in employing his newly designed high-powered screw presses.

With Blondeau identified as the engineer responsible for producing the St. Patrick coins, Part Two presents the historical context of when and why these coppers were issued. While Blondeau's technology made it possible to produce the St. Patrick coins, the undertaking of their production and utterance depended upon the unfolding historical events of the 1660s that led men with coin-manufacturing skills to work with persons of influence to produce and circulate a new series of coppers to address Ireland's need for small change.

Introduction

Ireland in the 1660s was politically and economically unstable. The restoration of the monarchy ushered in hope that rebuilding could commence in the Kingdom, enabling it to recover from the extensive destruction that had occurred during the Civil War of the 1640s as Oliver Cromwell's army laid waste to town after town across the land. Unfortunately, it would take an infusion of large amounts of funds to accomplish the tasks at hand and Ireland was broke. England could offer no real assistance since it faced the same problems as Ireland although London had access to more resources than Dublin.

During the 1660s, Irish officials faced two significant obstacles. The first was the resolution of the various claims from persons who had lost their property due to the extensive land seizures conducted by the Commonwealth. If property was to be restored to the original owners, then what was to become of the people whom Cromwell had settled on these lands? Financial remuneration was one possible solution, but neither Ireland nor England had the money. Unable to resolve this matter quickly, the populace was most disturbed by the uncertainty inherent in the situation. The second problem was the army. The standing Irish army in the 1660s was comprised mainly of troops from the Commonwealth era whose loyalty was questionable. Adding to the problem was the inability to pay them for months. This only increased the possibility that these troops would mutiny, which they did at various times. The more pressing of these two obstacles was the army for without their loyalty, all security in the Kingdom would be lost.

When Lord Ormond came to Ireland in 1662 as the king's representative, the problems concerning the army were uppermost in his mind. Early in his administration, he divided the army into three parts to ensure as much security as he could afford. First, all troops in Dublin were carefully selected based on loyalty to the king. These troops were better paid than those in the outlying provinces, thereby protecting the center of Ireland's political power. Next, he focused on the horse brigades, ensuring that they were better paid than foot soldiers. This was important since they were considered the heart of the military during a campaign. In this manner, Ormond, as the former commander of the Irish army under Charles I, was able to create a strategy if the Cromwell faction within the army should stage a rebellion. As time would prove, Ormond was well prepared when dissatisfied elements within the army attempted to assassinate him and other officials at Dublin Castle. And later still, when army garrisons revolted in the north over the lack of pay, he was able to effectively deploy his Dublin troops and horse brigades to quell the mutiny and prevent it from

spreading to other areas. In spite of these successes in deploying loyalist soldiers to contain forces in outlying areas, troops in the provinces were needed. This was most clear when tensions over conflicting land claims broke out into public unrest and rioting. Here, unpaid troops were needed to restore peace, but it was not definite that they would comply with orders from Dublin. The only solution was to pay the arrears owed the soldiers.⁴⁷

Ormond undertook several initiatives to acquire funds to solve Ireland's financial problems, especially those pertaining to the army. He explored means of generating general revenues through expanding trade and farm production at home. He also tried to cut the expenses of the army. Here, he instituted quartering troops in private homes to the disgruntlement of citizens. He even tried to downsize the army, disbanding soldiers deemed more loyal to the principles of Cromwell than to the King, but this was not possible unless they were paid. Another means to create money was through the establishment of a new coinage for Ireland.⁴⁸

Ormond in the 1660s was involved in two minting ventures. The first was the unsuccessful Viner Patent that proposed to issue silver coins for Ireland ranging from 1/2d to 4d. His participation in this enterprise may have been motivated for personal gain as Ormond, with the rest of Ireland, was awaiting compensation to reimburse him for what had happened to his estates under Cromwell. In any event, his involvement was limited to probably receiving some minor compensation for his endorsement of the Viner Patent. All of this occurred prior to his assuming his responsibilities in Dublin. The second attempt pertains to the St. Patrick coinage. Here, his motives were directed toward satisfying two main objectives. First was the desire to reestablish a Dublin Mint that would enable the Kingdom to achieve better control over its finances. The second objective was to pay the troops at a time of fiscal crisis when soldiers were needed to quell what was perceived as mounting unrest in the countryside. It is the convergence of these two objectives on Ormond's agenda in the 1667-1669 era that fostered the creation of a semi-official coinage that would later contribute to assist New Jersey in its need for small change.⁴⁹

Restoration Ireland

In 1660, the monarch was restored in England. The country was divided between those still loyal to the Commonwealth and those grateful to see Charles II on the throne. These were unsettling times, but the common sentiment was that the Puritan Revolution had to end for the country "could no longer bear the tyrannies they lay under, and, by seeing no other cure to their evil, the calling hope of his majesty was Irresistible..."⁵⁰

Two years later, Ormond returned to Ireland as the newly appointed Lord-Lieutenant. Having served the Stuarts during the Civil War as head of the royalist Irish forces of Charles I, he had fled the country, going into exile with the future King Charles II. Restored to his place as head of a longstanding Anglo-Irish family, he embarked on rebuilding a country in need of transformation.

Over a decade ago, Ireland had witnessed widespread destruction under Cromwell's invading forces. City walls had been breached, houses put to the torch and inhabitants slaughtered. All of this devastation was justified by Oliver Cromwell's view that the military conquest of Ireland was a Puritan "holy war" against Catholics loyal to the monarchy. In this light, all actions justified the means. Further, as per the rules of military engagement of the seventeenth century, fortified towns that failed to surrender prior to their walls being breached subjected all combatants and inhabitants therein to slaughter. In too many instances, royalist forces stood their ground, choosing death to surrender, as their opponents began the onslaught.⁵¹

In returning to Ireland, Ormond decided that Dublin should be transformed into a Baroque city, reflecting its position as the Kingdom's capital. Toward this end, he set plans in motion to expand

Dublin as can be seen today in the residential areas around College and St. Stephen's Green. He was also instrumental in bringing changes in the design of many important institutional buildings throughout the city. In all, Ormond's actions were directed toward transforming what was considered a backward outpost of the English empire into a city in step with the concepts of urban planning as practiced in the seventeenth century.⁵²

Ormond also undertook countrywide steps of reconstruction. In particular, he focused on reviving the Kingdom's economy that was in severe depression. In his 1664 instructions to his Council of Trade, he outlined his innovative plans:

You are to take into consideration all the native commodities (*sic*) of growth and production...and how they may be ordered, nourished, increased and manufactured...to the best advantage of the public... You are to consider how convenient and practicable any...new inventions, and improvements in any art, trade, or manufacture...you are to consider by what ways and means commerce may be promoted...and by making rivers navigable, and in draining bogs and lakes...⁵³

As a component of Ireland's restoration, Ormond investigated the Kingdom's coinage problem. By the early 1660s, Ireland's circulating currency was in disarray. As Dublin's Lord Justices and Council noted:

...grievances under which his majesties subjects in this kingdom have laboured for several years past...that several persons in all the cities corporate and markettowns (*sic*) throughout this kingdom, took a liberty, without any restraint to make...copper tokens, with such stamps as they pleased, in very great proportions, and vented them to the people for a penny each peece (*sic*), in exchange, under pretense that when they should be called in or decayed, the person who uttered them would receive them back again at the rates for which they issued them, whence...it came to pass that many of those that caused such tokens be so stamped and issued, kept out of the way, and so avoided the accepting or exchanging of the tokens they had so issued, to the great loss and disappointment of many poor people...⁵⁴

He had witnessed first hand the financial problems the Irish faced during the Civil War when he was Viceroy under Charles I. At that time, due to the scarcity of money, he became involved with the issuance of a small series of bullion coins in order to pay his troops and maintain an army in the field to oppose the anti-royalists. To accomplish this task, he had called upon Dublin residents to sacrifice their personal silverware to make coins, promulgating:

...we find it of absolute necessity for the reliefe (*sic*) of the officers of the army, that...all manner of persons of what condition or qualitie (*sic*) soever...doe (*sic*) deliver or cause to be delivered half or more of his, her or their plate to William Blanden, of Dublin, alderman, and John Pue, one of the sheriffes (*sic*) of the same citty (*sic*), taking their hand for receipt thereof, to the end use may be made thereof for the present relief of the said officers.⁵⁵

Not since Elizabethan times had the Irish enjoyed a sense of a national coinage when a series of copper and bullion coins were minted specifically for Ireland. Prior to then, there was a long hiatus going back to Edward IV (1461-1483) when the Kingdom enjoyed its first coinage as enacted by a nationalistic Irish Parliament that desired to create its own identity separate from England. Against these precedents, Ormond began to lobby for the reestablishment of the Dublin Mint that had not been in operation for over a hundred years. The goal was to end the Kingdom's monetary dependence on London, which was unable to be of any significant financial assistance in the 1660s. Also, he wanted to put an end to the abuses created by entrepreneurs as exhibited by the Armstrong Patent of 1660 that granted a private person the right to produce lightweight farthings for Ireland. Ormond strongly opposed this patent, deeming the farthings to be no different from

those produced under James I and Charles I which the populace detested. It was his opposition that led in part to Armstrong's failure in uttering his coins.⁵⁶

The chance to establish a national coinage was seen as a positive step in strengthening Ireland financially, as well as restoring its national identity. It would have removed the stigma of the 1637 Proclamation that ordered that the "name of Irish money or harps...be abolished, and that all accounts...made in English money."⁵⁷ As a precursor to the St. Patrick coinage, Ormond, prior to arriving in Ireland, had supported Sir Thomas Viner who, as a leader of a Dublin proto-banking group, was to obtain a patent. Once in Ireland, his concern over the country's monetary matters changed, as he became absorbed with pressing national concerns. By 1667, the year that he requested approval from London to mint £30,000 in farthings, he was aware that not everyone was pleased with the return of the monarchy. There were signs that some were ready to rebel against the new officials at Dublin Castle.⁵⁸

Disturbances were mounting in the countryside. Reports started to flow into Dublin that rioters were burning houses and otherwise causing disturbances that threatened the peace in many rural areas. There was always the danger that the situation might get out of hand. In matters such as this, officials had to depend upon the army "for their suppression...and Officers and Soldiers employed in that service."⁵⁹ But, the army had not been paid in months. Ormond was well acquainted with what happens when soldiers were not paid. In 1666, he had to put down a mutiny in northern Ireland where dissatisfied troops called upon the army to revolt due to the lack of payment. He also experienced such problems firsthand during the Civil War when royalist troops would not always respond to commands to contain Cromwell's advancing forces due to monetary matters. Having once faced defeat as a result of financial constraints, he wanted to ensure that the army was paid. This especially pertained to troops outside of Dublin who were mostly holdovers from the days of Cromwell. They were deemed dangerous and:

All precautions were no more than necessary at this time when the soldiers of the army, being of the old republican leaven, were ready to join in any seditious design or attempt to disturb and subvert the government...⁶⁰

The problem that Ormond faced was not easy to solve given the poor financial condition of both Ireland and England. Further, the London Mint in 1667 was just starting to recover from the damaging effects of the plague and the London Fire that had all but brought a stop to coin production in England. Given the pent-up need for coins in England, it was reasonable to assume that it would be years at best before Ireland would see a sufficient inflow of official coins. As to his desire to see the Dublin Mint restored, that process would take several years to accomplish, assuming that London granted its approval, which was not guaranteed. In the meantime, the monetary needs of the army had to be addressed as salary arrears amounted to seven months pay for many soldiers. And there were not even sufficient funds to properly house the army during the winter months, which led to enforced quartering among the general populace to everyone's displeasure. Dissatisfaction was widespread among the soldiers. A report to London authorities assessing the allegiance of the troops retold the response given by a soldier when asked which side he would fight for should a rebellion erupt. His response was telling: "that which pays the best."⁶¹

Thus, the restoration of the monarchy unleashed many changes in Ireland. Lagging behind was the resolution of the need to restructure the Kingdom's monetary system. And time was not on Ormond's side. Action was necessary, giving rise to the production of the St. Patrick series as a semi-official coinage in line with Ormond's plans to restore Ireland's economy, as well as keep the army under control.

Converging Historical Events

The first conceivable date for producing the St. Patrick series would have been the 1650s after Blondeau had arrived in London with his unique ability to economically effect the edging of thin coins. But, the 1650s were a period of controversy for him as mint workers constantly tried to discredit him. Also, he lacked a patron for such a project, who was needed if the venture were to be successful. With few friends and limited financial means, he lacked the resources to purchase equipment and supplies needed to undertake a project as large as minting tens of thousands of coppers for Ireland. In fact, it was lack of support for his innovations that led to his departure for France in 1659. Most significantly, this time frame posed unseen technological problems that would have prevented him from successfully producing these coins *en masse*. Specifically, his methods which employed high-powered screw presses to effect edging had an inherent problem that was not evident during the Commonwealth era since he played only a small role in manufacturing Cromwell's coins. In 1662, when he undertook full production of England's bullion coinage, the problem surfaced as the dies made by his manufacturer, Thomas Simon, failed due to the high pressure of the new equipment. This situation eventually led to Simon's replacement by John Roettier who introduced a hardened steel die (a product invented by Peter Johnson) that could withstand the constant pressure of Blondeau's modified screw presses. Given the high volume of production of the St. Patrick series as evidenced by its numerous varieties, it would have been technologically impossible to produce these coins in the 1650s. A final hindrance would have been the use of royalist devices such as FLOREAT REX (Prosper the King) on the coins, which would have been grounds for execution under Cromwell.⁶²

The 1660s were a more promising decade for introducing the St. Patrick coppers. The decade started with Charles II granting Sir Thomas Armstrong a patent to mint farthings for Ireland. This was the first serious attempt to address the severe small coin shortage in the Kingdom, for it was well recognized that the country was overrun with debased coinage. Charles II based his decision on the "benefit to our people...as well as amongst tradesmen for exchange of moneys" and demonetized all other tokens as follows:

Know yee, &c. that we have granted...to Sir Thomas Armstrong...to coyn such a quantity of farthing tokens, of copper, as may be conveniently issued...forbidding all other persons whatsoever to make, counterfeit and utter, any other such tokens, or any other pieces of copper, upon pain of forfeiture of the said counterfeit money, and engines used in making thereof...⁶³

Irish officials, however, were not favorably inclined to the Armstrong Patent. Yet, in 1661, they did pass a concurring order that outlawed all tokens in Ireland other than those made by Armstrong as follows:

Forbidding any person, or persons whatsoever, to make, or cause to be made, any brass or copper money or tokens, without special licence (*sic*) from his majesty, under pain of such penalties and punishment, as by laws of this kingdom could be justly inflicted...⁶⁴

However, Armstrong was unable to overcome opposition to his patent as instigated by Ormond upon his appointment as Lord-Lieutenant for Ireland. Nevertheless, the patent with its strong anti-token provisions posed a strong deterrent to anyone who might contemplate a private issuance of farthings. Of assistance to Armstrong was the support he had from mint authorities who referenced his patent in opposing alternative proposals. The matter unresolved, the mint considered issuing English regal farthings, starting with the production of a pattern coin for this project in 1665. If England initiated an official farthing, it would have lessened the need for a separate Irish coinage as had occurred when James I and Charles I issued their farthings that ran current on both sides of the Irish Sea. Confusing matters was the king's issuance of a separate

patent to Sir Thomas Viner to produce silver pence for Ireland. All of this activity created a high degree of uncertainty that would have deterred the viability of undertaking an unapproved production of coppers. It is not conceivable, therefore, that during such times in the first part of the decade that St. Patrick coppers could have been minted.⁶⁵

All of this changed by early 1667. By that date, the inability of the Armstrong Patent to produce a notable quantity of farthings was obvious. Also, it was apparent that the Viner patent was dormant and that England was not going to pursue any plan to mint regal coppers. Further, the reduction in the availability of bullion coins was becoming a problem due to the reappearance of the plague in 1665 which, at its height, killed 10,000 persons weekly. This disaster was followed the next year by the Great London Fire that raged for a week, destroying large sections of the capital. These two catastrophes led to the mint stopping the production of all silver pence and reducing the output of all other bullion coins, resulting in the populace hoarding bullion coins already in circulation. These events intensified the shortage of small change for ordinary business transactions. In response, the production of local tokens accelerated, which raised concerns as to the debasement of circulating money.⁶⁶

Coinciding with the slowdown at the Tower Mint was the decline in Blondeau's income since his payment as per terms of his patent was based on coin production at the rate of 3d/lb. for silver and 12d/lb. for gold. It is here that his personal ownership of five screw presses for making farthings probably served as an alternative means for him to earn money. In the business of private token manufacturing, he would have been following a long tradition at the mint where in the past many skilled workers had resorted to making coins on their own account for profit. For example, Ramage of the 1651 Blondeau trials, was noted as a prolific producer of copper tokens. As noted by contemporaries, this worker was not alone. As for penalties for undertaking such a task, Pepys reported an incident of a mint employee who made underweight groats of a prior monarch. Rather than being hanged for the offense, it was deemed that since he made coins of good quality he had done no harm.⁶⁷

These events opened the door to an alternative solution to the Irish small coin shortage. This took form that year when Ormond in his capacity as Lord-Lieutenant for Ireland received support in the form of a "king's letter" from Charles II granting Ormond sole authority to suppress all tokens in Ireland that did not have Ormond's approval. Such an instrument was commonly followed by a proclamation pertaining to a new coinage. This is a strong indication that Ormond had secured at least preliminary support to issue copper money. There is no record of Ormond being granted a patent to coin farthings. But, in 1667 while facing a particularly difficult fiscal crisis in that the Irish army could not be properly housed that winter, as well as not having been paid in months, he requested that copper coins in the amount of £30,000 be minted in Dublin.⁶⁸

Ormond's solution carried a stipulation that the coins should be milled. Although there is no record outlining a relationship between Ormond and Blondeau, if the project were to succeed, Ormond had to turn to London in order to secure a skilled engineer to produce his desired milled coins. There, Blondeau would have stood out as the engineer who was responsible for modernizing the Tower Mint. His anti-counterfeiting methods would have appealed to anyone who would want to avoid the abuses that accompanied the farthings of James I and Charles I, wherein the Irish complained that there "was scarce any man, but was a loser by those farthings." ⁶⁹ More significantly, Blondeau was known to Irish officials as he had been retained by Cromwell's government to explore the feasibility of reestablishing the Dublin Mint in the mid-1650s. In this task, Blondeau visited Ireland and was well acquainted with that Kingdom's concerns with their circulating currency. In a 1653 report to the Committee for Irish Affairs in England, the condition of Ireland's money was clearly stated:

...the pressing necessities of a mint to be appointed in this country, by reason of the great want of the small English money; for finding it adviseable (*sic*), as the only means appearing to us, to prevent the abuse of English coyne...proving bad and clipped, small payments could not easily be made either to souldiers (*sic*), or unto others, where by much distraction was occasioned....⁷⁰

There are significant telltale signs that something occurred between Ormond and Blondeau. For example, for the remainder of Ormond's appointment, he was silent as to any further requests for coppers for Ireland, which is noteworthy for a man who was otherwise very vocal on this topic. Also quiet was Slingsby, who, as a chief administrator at the mint, had been a strong and most vocal advocate of the basically defunct Armstrong Patent in opposing all those desirous of producing coppers for Ireland. This lack of opposition from both Dublin and London officials was crucial if a new coinage were to be issued for Ireland.⁷¹

It is significant to note at this juncture that Ormond between 1672 and 1678 was the guardian for William Earl of Derby. This hereditary Lord for the Isle of Man was a minor at the time and it was during this period that the St. Patrick coppers were current there. Upon his lordship's maturity, the St. Patrick coppers were demonetized, which contributed to their future continuation in New Jersey.⁷²

Supporting the theory that the St. Patrick coins were issued prior to Ormond's departure as Lord-Lieutenant in 1669 are the actions, or one should say the inaction(s), of his replacement that year, Lord Roberts. For the first time in years, a newly appointed Lord-Lieutenant did not propose a separate coinage for Ireland in order to address the monetary issues that faced the Kingdom. The following year, Lord Berkeley became the new Lord-Lieutenant. And, contrary to his predecessor, he became very active in the copper coin issue. First, he wrote to England's Secretary of State requesting permission to curtail any further uttering of tokens in Ireland. But, token production by town corporations and local merchants in Ireland was already in decline. This is a most clear indication that a different type of token had appeared in Ireland to satisfy local needs.⁷³

A confirming element in the tale of the origins of the St. Patrick coinage is the production curve for Irish tokens between 1660 and 1674. As Table II illustrates, local production basically ceased with the passing of the Armstrong Patent with its strong anti-token provisions. Then as it became obvious that the Armstrong venture was a failure, local token production resumed in earnest in 1663. London's consideration of making regal farthings in 1665 is reflected in the sharp decline in the issuance of tokens that year. But, London's failure to pursue its plans for regal coppers, compounded by the negative impact that the plague and the Great London Fire had on the Tower Mint, the making of Irish tokens accelerated, peaking in 1667-1668 at the height of Ormond's fiscal crisis with the army. Thereafter, the number of tokens being issued noticeably declined, reflecting the appearance of a new supply of coppers, being the St. Patrick coins. Given that Ormond had requested only £30,000 in coppers, this infusion of money was limited in comparison to existing needs for small change. Thus, token production would not have ceased. Finally, with Berkeley attacking the utterance of private tokens followed by Essex's ban on the issuance of all private tokens coupled with London's decision to issue regal coppers led to the decline in Irish token production in the early 1670s that eventually led to none being made bearing the date of 1674.⁷⁴

The period from 1669 onward is also important in having an impact on the production of copper tokens, for the mint had begun to utter small silver pence that would lessen the need for copper tokens. Also, the mint had recovered from the effects of the plague and the Great London Fire sufficiently enough to increase the pace of producing higher valued coins. This renewed activity reduced the need for tokens in general as silver pence, twopence, threepence and fourpence replaced the use of several tokens in making change. Also, as early as 1670, mint authorities began to contemplate the issuance of regal coppers. In their report to the king, they proposed that

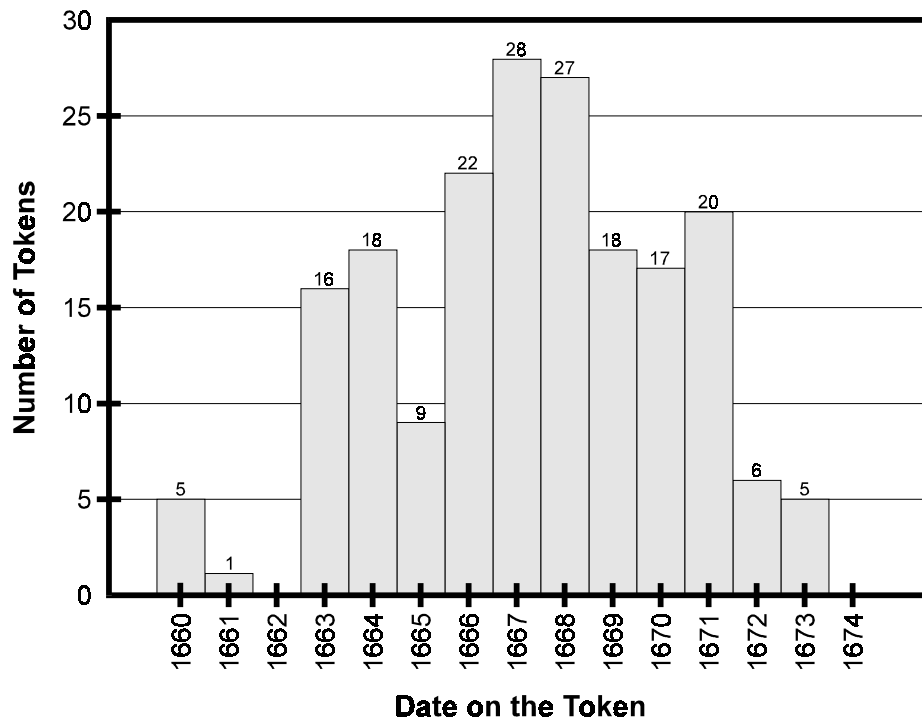


Table II: Irish Token Production

the coins should have an intrinsic value unlike then circulating local tokens. This was followed two years later by the decision to produce farthings and halfpence for small change. As Charles II proclaimed, the intent was “so there might be good money current amongst the poorest of Our Subjects.”⁷⁵

In 1672, Lord Essex was appointed Lord-Lieutenant for Ireland and proclaimed that henceforth it was illegal “to make or stamp, or cause to be made or stamped, any brass or copper, or other tokens whatsoever.”⁷⁶ Also in 1672, the mint issued a new series of regal farthings and halfpence, which would have lessened the viability of making St. Patrick tokens since Charles II demonetized all previous private tokens as follows:

...if any Person or Persons, Bodies Politique or Corporate, shall...presume to make, send, or utter any Pence, Half-pence, Farthings, or other pieces of Brass, Copper, or other Base Metal, other then...Authorized and allowed...We shall hold all such Offenders utterly incusable (*sic*), and shall cause their Contempt of Our Laws and Government to be chastified (*sic*) with Exemplary Sobriety.⁷⁷

Between 1667 and 1669, the convergence of events created an optimal time frame for the minting of the St. Patrick series. Ormond's desire to create a national coinage for Ireland as a component of his drive to place Ireland on a firmer financial footing coupled with his fiscal needs to pay the army would have forced him to turn to the professional moneyers in London to produce his coins in spite of his desire that Dublin should have its own mint. Here, he would have sought the advice of Tower Mint officials. Slingsby as its chief administrator would have been consulted and through him Ormond, if he were not already aware, would have learned of the technological advances

achieved with Blondeau's inventions. The result of such an exchange would have set the groundwork for the creation of the St. Patrick coinage. The first stage at this juncture would have been to make "petitioning" tokens. Such coins were commonly issued under the endorsement of influential sponsors. Coins of this nature were commonly produced in sufficient quantity to enable them to circulate widely. Ormond already had the "king's letter" of support. Thus, it is most reasonable to assume that Ormond would have authorized the manufacture of his "petitioning" St. Patrick coppers as he awaited final approval from London to implement fully his desire for a Dublin Mint. In the meantime, the fiscal crisis that he faced with the army would be averted for the time being. What he needed to do next was to secure final approval of his plans. Toward this end, the production of two different size coppers along with a silver shilling coin would have been in keeping with any attempt to establish a national coinage for Ireland.⁷⁸

It is within this context that a new series of coins of copper and bullion appeared in sharp contrast to all other tokens produced in the seventeenth century for Ireland. Their uniqueness exhibit all the hallmarks of Blondeau's technology and London's professional moneyers of the later 1660s and the telltale signs of designation as semi-official coins approved by Dublin authorities. As to Ormond's plans for a Dublin mint and the creation of an official Irish national coinage, that would have to wait for another time in the future. In the meantime, Ormond brought about a coin series that evoked its semi-official status through the quality of its craftsmanship and its distinctive reeded edge.

The St. Patrick Mint

It has been proposed by some numismatists that the Tower Mint was the producer of the St. Patrick coinage. It is certainly a fact that London was the center of the professional coin industry and where many town corporations and numerous merchants went to secure their dies or have their tokens made. Also, employees of the mint had a longstanding tradition of participating in the token-manufacturing business. David Ramage of the 1650s Blondeau trials was a prolific token producer. In 1661, he even tried to control the whole private token industry through his unsuccessful bid to outlaw all tokens not made by him. Thomas Rawlins was another employee that made tokens. He is noted for producing the corporation tokens for Oxford. However, none of this proves the involvement of the mint in producing the St. Patrick coinage.⁷⁹

While the idea that the mint was involved fits well with the concept that these coins enjoyed some form of official status, it is not possible that this occurred since the mint did not possess any modern farthing presses. In 1672, when it was decided that England would undertake the production of copper farthings and halfpence, it relied upon its officials to determine the practicality of such an enterprise. In its report, these officials stated that they did not have the necessary screw presses to make farthings and in order to comply with the request to initiate a regal copper series, the necessary equipment would have to be purchased and space created within the mint in order to accommodate the equipment. Thus, prior to this time, Ireland would have had to rely on others to satisfy its needs for a national coinage.⁸⁰

Since Blondeau produced the St. Patrick coinage using his innovations, he would have faced two possible locations for his operations. Ormond certainly would have preferred Dublin, but it is inconceivable that Blondeau would have consented to have his inventions transported across the Irish Sea where he would have had to relinquish effective control over his secrets. Rather, Blondeau would have insisted that the operation be in London.

The next decision in establishing the St. Patrick Mint would have been to determine the size of operations. Since the mechanized processes employed in manufacturing coins would have involved an extensive array of horse drawn rollers, mills for producing as well as sizing metal strips,



Figure 4: Swedish copper 1/6 ore.
(Shown 1.5X actual size.)

and equipment for making blanks, it would have taken an extensive period of time and money to construct the machinery and build the necessary structures. In the alternative, Blondeau could have sought a source for copper blanks that he could use to meet Ormond's needs. In this, he probably took the suggestion made by several token petitioners in the 1660s to acquire the planchets from Sweden. While under the concepts of mercantilism it may have been preferred to have England as the supplier, the domestic copper industry at this junction was in total collapse. Even when it came time for the mint to produce regal copper farthings and halfpence in 1672, it relied upon Sweden. By having planchets delivered and ready for striking, Blondeau would have saved the great cost of creating a complete production line, as well as being able to enter production quickly.⁸¹

Although Blondeau had the necessary technology to manufacture the St. Patrick coins, he certainly was not able to undertake such a venture alone. Numismatists have proposed several persons as likely participants in the project. Breen suggested Nicholas Briot as the engraver based on a limited punch-link connection between some of the coins that he produced while at the Edinburgh Mint and some St. Patrick coins. Briot's participation, however, is not possible since the era up to the time of his death lacked the technology to mass-produce coppers with a reeded edge. Further, Briot's puncheons were not unique. During the 1640s when Briot was active, engravers did not make their own puncheons. Rather, a limited number of smiths who plied their trade beyond the watchful eyes of mint authorities made puncheons that were available to Briot along with anyone else who might have had an interest in acquiring them. Finally, by the time that Blondeau came to the Tower Mint in 1662, many of Briot's puncheons had already been sold off and the remainder were available for sale by mint employees. In this context, it is reasonable to state that Briot played no role at the St. Patrick Mint although it is quite possible that Blondeau purchased a few of Briot's puncheons for his project. As noted in Part One of this article, Blondeau had trained at the Paris Mint under Briot so he would have been familiar with his master's work.⁸²

Another person referenced by numismatists as having a role in the production of the St. Patrick coins is Lord Essex given that the terminus date for the series occurs during his administration.⁸³ But this does not confirm Essex's involvement. Rather, the historical record points in another direction. As Lord-Lieutenant for Ireland between 1672 and the sinking of the yacht *Mary*, Essex received several proposals for coining official coppers. Of these, he considered only one as reasonable. In conveying his sentiments on the matter, he wrote to London on February 10, 1675:

Among the directions I sent by your lordship, there was one concerning farthings: since you went, there hath been a proposal offered to me, which seems to be more reasonable than that which we discoursed...I have therefore inclosed (*sic*) it, to be considered on your side...⁸⁴

The time frame for this proposal listed the spring of 1676 as the contemplated issue date. But, this optimistic date was dependent upon the approval of certain terms that no prior patentee had ever been granted. The request for an interim salary and the waiver of duties on copper to be imported from Sweden would have delayed action. As stated in the proposal:

It is humbly offered, by the undertakers, to furnish this kingdom with copper farthings and halfpence...by Midsummer next, to import such a quantity of copper blocks, or chips, as may be possible, with two presses, be coined by the spring ensuing...and to give such an impression, or

stamp, as his excellency and his honourable shall think fit...these undertakers...crave an allowance of four hundred pounds per annum salary for three years, toward the charge and interest of their disbursements; and that the copper to be imported for this his Majesty's service, may be freed from the duties and customs of excise...⁸⁵

Given that the yacht *Mary* sank on March 24, 1675, with two St. Patrick coppers onboard, Essex's correspondence is clear evidence that he had not undertaken the minting of these coppers. If he had, he would not have been considering various proposals to issue alternative coppers for Ireland. Thus, the speculative assumption that Essex was involved in the issuance of St. Patrick coins can be laid to rest along with that period of his governance.

A most positive clue as to who was involved with Blondeau in manufacturing the St. Patrick coinage is gleaned from his will of 1672 wherein he bequeathed his rights to his patent to employ his techniques on coppers and the right to keep secret his inventions. Therein he divides his assets as follows:

Slingsby, Issac de Caux and John Colborne were to share jointly as beneficiaries of Blondeau's patent for the deployment of his technology on all coinage to be produced at the Tower Mint, as well as the privilege to maintain those techniques a secret. Slingsby's share was dependent on his paying the cost of engraving the rings for edge-marking. These beneficiaries jointly were to pay Peter la Castill £20 per year for his contribution to the edging process.⁸⁶

Later in Colborne's will, he bequeathed one-half his interest to his brother Robert and the other one-half to Slingsby and stipulated that if Slingsby failed to perform then his brother and Peter Johnson were to receive Slingsby's share. Finally, Blondeau bequeathed his five farthing screw presses to Slingsby. Although the business of manufacturing private tokens had all but ceased by 1672, the patent generated a sizable annual income and the screw presses had an estimated value of £300. In all, these were considerable assets for the times.⁸⁷

Although the exact relationship between these men is unknown, this mix of men of high coin manufacturing caliber constituted the proper combination if one were to make coins for Ireland. Slingsby, as chief administrator at the Tower Mint and main advocate of its right to produce all national coinage, had the power to curtail any private coinage. As for Ireland, he had a personal interest in any proposal to issue coppers in that Kingdom since he had contemplated undertaking such a venture himself. Given that he was Blondeau's longstanding friend, his participation would have seemed natural. Colborne's skills as an engineer for coin manufacturing would have been valuable because someone was needed to oversee daily operations. La Castill obviously had a contribution to make as seen in his receiving a bequest for his involvement in refining Blondeau's edge making capabilities. And the reference to Johnson, who was a smith, is significant since he was the discoverer of the method to make hardened steel dies that could withstand the pressures exerted by Blondeau's high-powered screw presses in producing graining on coins in a one-step process that was necessary if the St. Patrick coins were to be produced economically.⁸⁸

The instructions outlined in Blondeau's will combined with the mix of beneficiaries have all the appearance of the existence of a contract or partnership between these men to produce coins beyond the walls of the Tower Mint. In the years prior to the Industrial Revolution, such arrangements were not formal or recorded in a legal manner as they are today. Given the manner in which these beneficiaries were named and the specific tasks that they were required to perform, it can be reasonably assumed that these individuals constituted the main participants who, in addition to Blondeau, were responsible for producing the St. Patrick coinage.

Semi-offical Status

It has often been stated by numismatists that the quality of workmanship exhibited on the St. Patrick coins conveys a strong sense of enjoying some form of official status. And the coins themselves have several confirming elements that no ordinary token employed. Further, the coinage evokes a high production standard that is in keeping with an attempt to portray a national coinage for use in daily transactions.

There can be no denying that Ireland was in desperate need of a coinage to replace the debased, lightweight and overvalued tokens that town corporations and merchants produced. Ever since the abolishment of all coins referenced as "Irish Money" in 1637 followed by the semi-demonetizations of James I and Charles I farthings in 1644, the country was awash with an assortment of rebel money, outdated Tudor coins, clipped English money and numerous "outlandish" coins, many of which represented the worse of English circulating tokens.⁸⁹ As early as 1653, Dublin officials in writing to England's Committee for Irish Affairs presented the case most clearly:

The greatest part of the English proving bad...small payments could not easily be made either to the souldiers (*sic*), or unto others, where by much distraction was occasioned...by reason of very much corruption and abasement discovered every day to grow more and more...⁹⁰

The exact amount of coppers needed in Ireland to satisfy the Kingdom's needs is unknown. But, several different proposals give an idea of the extent of the need. One 1652 petition to London authorities stated the need at £20,000 followed by another request that set the need at £100,000. When the Armstrong Patent was adopted in 1660, the matter was left to the judgment of the patentee who was granted the right "to coyn such a quantitie (*sic*) of farthing tokens, of copper, as may be conveniently issued."⁹¹ Ormond's request in 1667 was for £30,000. This amount could have been satisfied by Blondeau's five farthing screw presses, where each was able to produce £250 of coppers per week. Given that the St. Patrick coins were minted between 1667 and 1669, there was sufficient time for Blondeau and his associates to satisfy Ormond's request during the closing years of his administration as Lord-Lieutenant for Ireland.⁹²

This spread in numbers is similar to the debate over William Wood's patent of 1722. In spite of opposition to his allowance for uttering £108,000 of farthings and halfpence, he did circulate £40,000 in coppers.⁹³ Thus, while the amount can be debated, there was general agreement that Ireland needed an infusion of coppers.

Into this void of regal coppers appeared the St. Patrick coins. Yet, they are not ordinary tokens. Unlike common coppers that gave the issuers name in order to effect redemption, the St. Patrick coins are more in keeping with the format of "petitioning" tokens of the era. Here, privately made coins were prepared with the expectation that the issuer would eventually obtain royal sanction for his endeavors. In such instances, these coins evoked a different tone in their legends. For example, one contender's obverse legend stated: THE KINGS GRACE. This is certainly comparable to Blondeau's legend of FLOREAT REX or "Prosper the King." Further, Blondeau's token was in Latin, which was generally reserved for officially sanctioned coinage. This contrasts with merchant and corporation tokens whose legends were in English.⁹⁴

Another noticeable feature of the St. Patrick coppers is that their size and corresponding weight greatly exceed that of common tokens of the period. The usual range in diameter of tokens during the first decades of the seventeenth century was between 13 and 15 mm. By the 1660s, it had increased to between 16 and 19 mm. Throughout the period, town-authorized tokens tended to be at the higher end of these measurements. Larger still were the "petitioning" tokens of Charles II where the standard was about 24 mm, which is consistent with the smaller St. Patrick coins. The

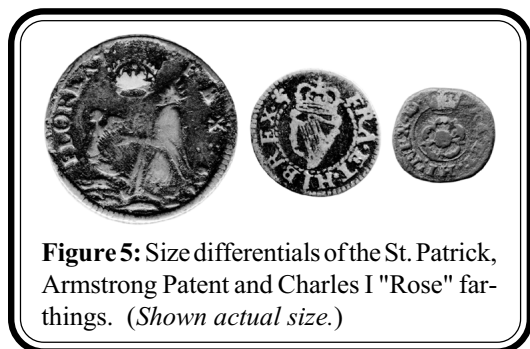


Figure 5: Size differentials of the St. Patrick, Armstrong Patent and Charles I "Rose" farthings. (Shown actual size.)

larger size reflected the belief that for official coins there should be a reasonable relationship between the ascribed value and intrinsic cost of the metal. But, unlike bullion farthings, coppers of the era never contained sufficient metal content to justify their denomination. Still, Blondeau's coppers weighed more than twice those issued under the Armstrong Patent, which enjoyed official sanction, and significantly more than the Charles I "Rose" farthings.⁹⁵

Then, there is the matter of anti-counterfeiting features. With the exception of a late 1650s Irish token with an inserted plug, common coppers of the era did not have any effective feature to protect a coin's integrity. By contrast, "petitioning" tokens generally displayed a plug insert or had their edges reeded although with non-Blondeau examples, the latter feature was crudely made. By the 1660s, it was unreasonable to think that anyone would seriously consider producing semi-official coinage that was not designed in some fashion to hinder counterfeiting.⁹⁶

The plug insert on the "Rose" farthing of Charles I was a feature with which the populace was acquainted. However, coins with a reeded edge, along with those whose edges were inscribed, were deemed to exhibit the best that technology could produce to protect official coinage as evidenced by their use on English bullion coins of the period. As Blondeau stated in defense of his edging methods, counterfeiting "is absolutely prevented by my invention."⁹⁷ In this he was correct. Of the few examples of private prototypes that exhibited a reeded edge, the graining is consistently referred to as being of crude construction. It could not have been otherwise since no one had access to Blondeau's technology, which was needed in order to economically perfect a finely reeded edge. And without an incentive for profit, there would be no reason to replicate a coin. The St. Patrick coins with both an inserted plug and a reeded edge had all the hallmarks of a coin intended to garner official support and meet with approval by an Irish populace that had grown tired of lightweight and counterfeit coins.

A final aspect of the St. Patrick coinage that basically confirms their semi-official status is that this series was produced in four denominations, which is unlike any other token series for the era. The gold coin is listed as unique. The silver coin is referenced as a shilling. The copper pieces are commonly referenced as farthings and halfpence. The weight differential between the two coppers raises the possibility that the larger coin may have been of a more unusual denomination. It was proposed in 1661 by Slingsby that the Tower Mint issue a series of coins of the following odd denomination: 5/4d, 3/2d and 7/4d. His suggestion was based on the need to limit the use of scarce small bullion coins to make change. As a counterpoint to all these comments is a contemporary's commentary in 1681 that identified the larger copper as a halfpence. Unfortunately, the historical record is absent of either Ormond's or Blondeau's intent although the existence of four distinct coin types is historically associated with official coinage rather than with private tokens.⁹⁸


Overall, the quality of engraving and the features of the St. Patrick coins along with their production in several denominations illustrate their semi-official standing. Otherwise, a less expensive coin series would have been made to address the small change needs of the Irish. But instead, a concerted effort was made to produce coins of high standards. In this, the coins are consistent with English "petitioning" coins of the period that were produced in sufficient quantity that they became a part of the circulating currency. But, Ormond and Blondeau produced a series of coins rather than the usual presentation of a singular denomination, which underscores Ormond's

desire for a new national coinage for Ireland rather than a mere augmentation of the existing money supply. This is consistent with his other efforts to place Ireland on a firmer financial footing and assist in the Kingdom's rebirth from the destruction unleashed during the Civil War and the degradation of Cromwell's reign.

Part Two Conclusion

This article does not entirely remove the mystery surrounding the St. Patrick coinage. It has, however, approached its topic from a different vantage point, starting with an examination of the technology necessary to produce economically a thin milled copper with a reeded edge. Here, Blondeau's inventiveness stands out among all others as the sole person possessing the necessary technology to produce these coppers. But as an engineer, he would not have been successful in producing large quantities of coppers without the quiet acquiescence of the Tower Mint as given by Slingsby. And, in order to succeed in circulating these coins, it was necessary to have the support of Irish officials. Here, the influence of someone of the stature of Lord-Lieutenant Ormond would have been crucial. Also, in order to succeed, Blondeau would have needed the assistance of a smith of the caliber of Johnson to make hardened steel dies and the ability of a La Castill with his edge-marking skills. Finally, he would need an engineer like Colborne to oversee operations at the St. Patrick Mint as he focused on his duties at the Tower Mint, which in 1667 was on the verge of resuming full production. All of these factors converge with Ormond's request to produce farthings for Ireland in 1667.

The St. Patrick series represented a vast improvement over all Irish coppers that preceded it. It had two salient points that were directed toward satisfying potential opponents. The most noticeable at first is the size of the farthing, or the smaller copper, which greatly exceeded that of any prior copper authorized for the Kingdom. This fact would have gone a long way toward satisfying the call for a base metal coin that had a reasonable relationship between the intrinsic worth of the metal in a coin and its stated denomination. As the Lord's Justice in Dublin stated in complaining about local tokens: for the "value of every twenty pence...there was raised near twenty shillings." ⁹⁹ The second point is the coin's two anti-counterfeiting features. The brass splashers was an enhancement over the brass plug on the "Rose" farthings of Charles I and the important reeded edge. These features would have satisfied anyone concerned with protecting the coins. In this instance, no Jonathan Swift rose to attack the venture as occurred with Wood's Money. Rather, there appears to have been a quiet acceptance of their circulation as evidenced by the lack of critical commentary of this venture. Contemporary commentators were quick to attack Ormond for what he did or didn't do and for what occurred during his administration. In this instance, the lack of criticism underscores the fact that the general populace must have been pleased to see an infusion of coppers that were more substantial in weight than they had been accustomed to. In this matter, there was nothing to complain about.

The St. Patrick coins were the finest coppers that had ever been produced for Ireland up to that time. They were a tribute to the technology employed in their manufacture and to the men who participated in their production. It was a reflection of their determination to produce a coinage that would meet the needs of ordinary citizens in their every day transactions, giving them a degree of fair value unlike tokens issued by others. When Newbie transported a number of them to New Jersey, his actions resulted in introducing a needed and most interesting coin to the American field of numismatics. 

Acknowledgements

I wish to express my appreciation to John Griffie and Stan Stevens whose insightfulness in examining hundreds upon hundreds of St. Patrick coins was shared with me during the preparation of this article. In particular, Stan reviewed with me at the 2002 Florida United Numismatic Convention numerous photographs of St. Patrick coins that had been taken in the preparation of John's forthcoming book on the attribution of these coins. There, I was able to confirm the pattern of one-sided offsets that stemmed from Blondeau's technology. This visual analysis was possible due to the quality of Bill Noyes's photographic work. This generous exchange of information enabled me as a historian to correlate the physical evidence with the written record in setting the origin of the St. Patrick coinage on a firm interpretive foundation.

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In addition, I wish to extend my appreciation to Philip L. Mossman who spent many hours reviewing this article, making many helpful suggestions. His editorial comments enhanced the presentation herein.

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1. David D. Gladfelter, "Mark Newby: Quaker Pioneer" *The Colonial Newsletter* (December, 1989), p. 1125; Walter Breen, *Encyclopedia of U.S. and Colonial Coins* (New York, 1988), p. 34; Personal communication with Philip L. Mossman in April and May of 2002. As Mossman pointed out in our correspondence, the St. Patrick coppers "would not be redeemed at a value greater than their legislated exchange." While it was common for coppers to circulate in the colonies at what was deemed to be twice their face value, the actual exchange rate varied from colony to colony.
2. Breen, op. cit., p. 33. For a listing of early numismatists' views on the origin of the St. Patrick coinage, see: Sylvester S. Crosby, *The Early Coins of America* (New York: reprint, 1983), pp. 136-37.
3. James Simon, *Simon's Essay on Irish Coins and Currency of Foreign Monies in Ireland* (Dublin: 2nd edition, 1810), pp. 47-48.
4. Philip Nelson, *The Coinage of Ireland in Copper, Tin, and Pewter, 1460-1826* (London, 1905), p. 16.
5. Herbert A. Grueber, *Handbook of the Coins of Great Britain and Ireland in the British Museum* (London, 1899), p. 240.
6. Michael Dolley and Margaret Warhurst, "New Evidence for the Date of the So-called 'St. Patrick's' Halfpence and Farthings" *Irish Numismatics* (September-October, 1977), pp. 161-63; Michael Kenny, "A Small 17th Century Find from Killaraght, Co. Sligo" *Irish Numismatics* (March-April, 1982), pp. 51-52; John Lindsay, *A View of the Coinage of Ireland from the Invasion of the Danes to the Reign of George IV* (Cork: Ireland, 1839), pp. 134, 136.
7. Walter Breen, "Comments on St. Patrick Halfpence & Farthings" *The Colonial Newsletter* (April, 1968), pp. 214-16; C. E. Challis, *A New History of the Tower Mint* (Cambridge: England, 1992), pp. 296, 341.
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9. William J. Hocking, "Simon's Dies in the Royal Mint Museum, with Some Notes on the Early History of Coinage by Machinery" *The Numismatic Chronicle* (1909), pp. 60-62.
10. Challis, op. cit., p. 250; Hocking, op. cit., pp. 72-74.

11. Denis R. Cooper, *The Art and Craft of Coin Making: A History of Minting Technology* (London, 1988), pp. 101-2; Hocking, op. cit., pp. 78-85.
12. Challis, op. cit., pp. 300-302. Briot was dissatisfied with the Paris Mint authorities, which was the probable motivating factor for his departure for London. This situation was similar to the underlying reason for Blondeau's departure 20 years later.
13. H. W. A. Linecar, *British Coin Designs & Designers* (London, 1977), p. 47; M. M. Archibald and M. R. Cowell (ed.), *Metallurgy in Numismatics* (London, 1993), vol. III, pp. 143-46.
14. Linecar, op. cit., p. 48.
15. Hocking, op. cit., pp. 83-85, 88; Cooper, op. cit., p. 47. Initially, there was extensive resistance to modernizing the Paris Mint, which was similar to what Blondeau experienced in London in the 1650s.
16. Challis, op. cit., pp. 329-30; Hocking, op. cit., p. 89.
17. *Calendar of State Papers: Domestic Series* (1654), p. 131. This source is the edited work of Mary A. E. Green for the Records Office in London, England.
18. Thomas Violet, *The Answer of the Corporation of Moniers in the Mint* (London, 1653), p. 21. Violet proposed to mint authorities in 1651 and 1659 that copper or tin farthings and half-farthings be officially produced for England and Ireland.
19. Peter Blondeau, *A Most Humble Memorandum* (London, 1652).
20. Ibid.; Hocking, op. cit., pp. 86-87.
21. Violet, op. cit., p. 16; Blondeau, op. cit.; Hocking, op. cit., p. 89. A major contributing factor in delaying the modernization of the Tower Mint was the weak English economy of the 1600s as a result of the Civil War.
22. Blondeau, op. cit.
23. Violet, op. cit., pp. i, 1.
24. *Calendar of State Papers*, op. cit., (1654), p. 131.
25. Ibid., (1655), p. 215; John Craig, *The Mint: A History of the London Mint from A.D. 287 to 1948* (Cambridge: England, 1953), p. 153; Hocking, op. cit., p. 95. Blondeau produced only about two percent of the Commonwealth's bullion coins.
26. C. E. Challis, "Presidential Address" *The British Numismatic Journal* (1991), p. 173; *Calendar of State Papers*, op. cit., (1662), p. 522. Blondeau was also granted a pension of £100 per year "to enable him better to carry on the new way of coining." This was a vast improvement over the inconsistency in compensation he received in the 1650s. See: *Calendar of State Papers*, op. cit., (1661-1662), p. 375.
27. Challis, *A New History*, op. cit., pp. 343-46. Historians have claimed that the actual cost for the project was probably higher since Slingsby was given £1,600 to cover expenses. See: *Calendar of State Papers*, op. cit., (1662), p. 562.
28. Robert Latham and William Matthews (ed.), *The Diary of Samuel Pepys* (Los Angeles, 1971), vol. IV, pp. 144-47; Challis, *A New History*, op. cit., p. 343; Craig, op. cit., p. 163.
29. See: *Coincraft's 2000 Standard Catalogue of English and UK Coins 1066 to Date* (London, 1999) which illustrates the English coins minted in this era.
30. *Calendar of State Papers*, op. cit., (1662), pp. 493, 496.
31. George C. Williamson (ed.), *Trade Tokens: Issued in the Seventeenth Century in England, Wales, and Ireland* (London, 1889), vol. I, p. xxv; George Berry, *Seventeenth Century England: Traders and their Tokens* (London, 1988), pp. 2-6.
32. Thomas Dunsterville, *A Declaration Concerning State-Farthings* (London, 1654), p. 4. He was an unsuccessful Petitioner for officially sanctioned private coppers.

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33. C. Wilson Peck, *English Copper, Tin and Bronze Coins in the British Museum 1558-1958* (London: 2nd edition, 1964), pp. 590-91, 598-99.
34. Brian J. Danforth, "Discovered: Wood's Money with a Reeded Edge" *The Colonial Newsletter* (April, 2002), pp. 2334-35. The source for the concern with Wood's Irish coins lacking an anti-counterfeiting feature such as a reeded edge was Jonathan Swift as referenced in his "Drapier Letter no. 3."
35. Peter P. Gaspar, "Simon's Cromwell Crown Dies in the Royal Mint Museum and Blondeau's Method for the Production of Lettered Edges" *The British Numismatic Journal* (1976), p. 62.
36. Peter Blondeau, *The Humble Representation of Peter Blondeau as a Warning, Touching several disorders happening by Monie ill-favoredly Coined* (London, 1651), pp. 3-5.
37. Challis, *A New History*, op. cit., p. 343. In April of 1664, Blondeau was granted a "Pass to embark with his goods and servants for Poland." See: *Calendar of State Papers*, op. cit., (1663-1664), p. 574.
38. Cooper, op. cit., pp. 47-48.
39. Williamson, op. cit., vol. I, p. xxiii.
40. Hocking, op. cit., p. 90; Challis, *A New History*, op. cit., pp. 343, 347.
41. This table is the result of a random review of photographs of St. Patrick coins that was conducted with Stan Stevens at the Florida United Numismatists Convention on January 12, 2002. Those photographs were prepared by Bill Noyes for John Griffie's forthcoming book on the attribution of St. Patrick coins.
42. Breen, *Encyclopedia*, op. cit., p. 34.
43. Challis, *A New History*, op. cit., p. 343.
44. Ibid.
45. Archibald, op. cit., vol. III, p. 134; Gaspar, op. cit., pp. 58-60; Challis, *A New History*, op. cit., pp. 348-49.
46. Personal communication with John Griffie in December, 2001.
47. Toby Barnard and Jane Fenlon (ed.), *The Dukes of Ormonde, 1610-1745* (Woodbridge: England, 2000), p. 117; Thomas Carte, *The Life of James Duke of Ormond...With an Appendix and a Collection of his Letters* (Oxford: England, 1851), vol. IV, pp. 141-42, 248-56. Ormond had requested that troops be sent from England, but London declined since it faced the same problem.
48. Carte, op. cit., vol. V, pp. 67-68, 73. Letters from Lord Ormond to his son Earl Orrery, 1667.
49. Colm Gallagher, "The Irish Copper Coinage 1660-1700; Notes towards a history" *Numismatic Society of Ireland* (Occasional Papers, No. 26, 1983), p. 23; Barnard, op. cit., p. 118. Ormond eventually received partial reimbursement in the amount of £30,000 on the losses he incurred as a result of the Civil War.
50. Lord Mountmorres, *The History of the Principle Transactions of the Irish Parliament from the year 1634 to 1666* (London, 1792), vol. I, p. 253.
51. Peter and Fiona Somerset Fry, *A History of Ireland* (New York, 1988), p. 154.
52. Marie and Conor Cruise O'Brien, *A Concise History of Ireland* (New York, 1972), pp. 70-71.
53. Mountmorres, op. cit., vol. II, pp. 221-22.
54. Simon, op. cit., p. 124.
55. Ibid., pp. 114-15; F. Willson Yeates, "Further Notes on the Irish Coinage, 1641-1652," *The British Numismatic Journal* (1921-1922), pp. 192-93.
56. Patrick Finn, *Irish Coin Values* (London, 1979), pp. 11, 14, 16; Mountmorres, op. cit., vol. I, p. 339; Gallagher, op. cit., p. 22.

57. Simon, op. cit., p. 46.
58. Barnard, op. cit., pp. 118-19.
59. *London Gazette*, February 18 and March 4, 1668.
60. Carte, op. cit., vol. IV, pp. 141-42.
61. Ibid., *Calendar of State Papers*, op. cit., (1663-1664), vol. IV, p. 251.
62. Marvin Lessen, "Simon's Milled Gold Coins and Medals of Charles II, 1660-1662," *The British Numismatic Journal* (1995), pp. 159-61; Challis, "Presidential Address," op. cit., pp. 171-72.
63. Simon, op. cit., p. 122.
64. Ibid., p. 51.
65. Ibid.; Gallagher, op. cit., pp. 22-23.
66. Challis, *A New History*, op. cit., p. 340; Philip Frances (ed.), *John Evelyn's Diary* (London, 1963), pp. 146, 153. See: Coincraft, op. cit., for various coin mint dates.
67. Albert Feavearyear, *The Pound Sterling: A History of English Money* (Oxford: England, 1963), p. 123; Latham, op. cit., vol. IV, p. 143.
68. Gallagher, op. cit., p. 23; Simon, op. cit., p. 51; *Calendar of State Papers*, op. cit., (1672), p. 497. This directive was for Ormond only and not for any other official.
69. Dunsterville, op. cit., p. 10; Henry W. Henfrey, *Numismata Cromwelliana: or, the Medalllic History of Oliver Cromwell* (London, 1877), pp. 82-86; Gallagher, op. cit., p. 23.
70. Simon, op. cit., p. 119. The proposal was for £100,000 to be minted in order to address Ireland's needs for small change.
71. Gallagher, op. cit., pp. 23-24, 26.
72. Ibid., p. 37.
73. Ibid., pp. 24-26; Simon, op. cit., p. 49; Williamson, op. cit., vol. II, pp. 1355-1428.
74. Ibid.
75. *By the King: A Proclamation For Making Current His Majesties (sic) Farthings & Half-pence of Copper*, 1672; *Calendar of State Papers*, op. cit., (1670), p. 560.
76. Simon, op. cit., p. 134.
77. *By the King: A Proclamation*, op. cit. Starting in 1672, there was a serious effort to stop the practice of private coining. Warrants were issued to seize equipment and prosecute those involved. Those who ceased operations were deemed pardoned. See: *Calendar of State Papers*, op. cit., (1672), p. 283.
78. R. H. Thompson, "Central or Local Production of Seventeenth-Century Tokens," *The British Numismatic Journal* (1989), pp. 206-10; Peck, op. cit., pp. 123, 127-28.
79. H. E. Salter, *Surveys and Tokens* (Oxford: England, 1923), pp. 359-60; Peck, op. cit., p. 98.
80. Peck, op. cit., pp. 602-5.
81. Ibid., pp. 104, 590-91, 603. One of the effects of the Civil War was that copper production in England had basically ceased. The little that was produced was deemed inferior to that imported from Sweden and the Continent. See: William Rees, *Industry Before the Industrial Revolution* (Cardiff: Wales, 1968), vol. II, pp. 493, 496.
82. Challis, *A New History*, op. cit., pp. 296, 341; Breen, *Encyclopedia*, op. cit., pp. 33-34.
83. Gallagher, op. cit., pp. 26-27.

84. *Letters written by his Excellency Arthur Capel, Earl of Essex, Lord Lieutenant of Ireland* (London, 1770), p. 74.

85. *Ibid.*, pp. 75-76.

86. Challis, *A New History*, op. cit., p. 343.

87. *Ibid.*; Henry Symonds, "English Mint Engravers of the Tudor and Stuart Periods, 1485-1688," *Numismatic Chronicle* (1913), p. 375. Concern with Slingsby's future participation probably stemmed from his new duties as Secretary to the Board of Trade, which would have greatly lessened his involvement in coining activities.

88. Challis, *A New History*, op. cit., pp. 363, 365. Richard Greenwood of Dublin produced a token whose obverse reflects an association with the St. Patrick coinage. What is not currently known is the relationship between these pieces. A second example was issued in Enniscorthy, County Wexford, Ireland. See: Robert Sharman, "'St. Patrick for Ireland' Token" *Irish Numismatics* (May-June, 1980), p. 109.

89. Simon, op. cit., p. 119.

90. *Ibid.*

91. *Ibid.*, p. 122.

92. Peck, op. cit., p. 605.

93. Brian J. Danforth, "Wood's Money: Acceptance or Rejection in Ireland," *The C4 Newsletter* (Fall, 2000), pp. 19, 30.

94. Peck, op. cit., p. 123. For a discussion on iconographical evidence, see: Michael J. Hodder, "The Saint Patrick Copper Token Coinage, A Re-evaluation of the Evidence," *The Colonial Newsletter* (November, 1987), pp. 1016-18.

95. Michael Mitchiner and Anne Skinner, "English Tokens, c. 1425 to 1672" *The British Numismatic Journal* (1984), pp. 134-41.

96. Peck, op. cit., pp. 92, 109, 124.

97. Violet, op. cit., p. 8.

98. Philip L. Mossman, *Money of the American Colonies and Confederation* (New York, 1993), pp. 124-30; Gallagher, op. cit., pp. 26-27; Peck, op. cit., p. 603. Peck stated that coins executed in bullion constituted almost conclusive evidence of the involvement of Tower Mint workers. See: Peck, op. cit., p. 108.

99. Simon, op. cit., p. 124.

**BY SUDDEN DESCENT:
DISCOVERY OF THE GEORGE COLONIAL PAPER HOARD**

by
David D. Gladfelter, NLG; Moorestown, NJ

It was, literally, a dark and stormy night in the year 2001. Inside his 18th century farm house, a member of an old-line Freehold Township, N.J. family, whom we shall call George, was standing in the kitchen when the plaster ceiling suddenly gave way above his head. Jumping back to safety, he couldn't believe his eyes.

Floating down from the rafters, amid clouds of dust and debris, were several dozen ancient stiff paper rectangles, the size of jumbo business cards, all covered with typeset printed designs, some with red colored borders and figures. Retrieving one of them, George observed a set of neat, official-looking signatures written in old-fashioned brown ink, one above the other. Symbols for pounds, shillings and pence appeared. On the face of this one, then the next, and the next after that, appeared the date March 25, 1776, and near it the words: "Emitted by a LAW of the Colony of NEW-JERSEY."

George wasn't certain what it was that had fallen out of his ceiling, but he knew it was of historical importance.

A boyhood friend, Elliot P. Durann, operated a coin shop in downtown Freehold Borough. George carefully gathered up the dusty documents, approximately 55 of them, and took them into Durann's shop for an explanation.

George's find proved to be a hoard of colonial era bills of credit – printed paper instruments issued by authority of legislative bodies that circulated as legal tender within the colonies of issue. All but three were emissions of the Colony, later State, of New Jersey. The three exceptions included two pieces of Continental currency and one New York item.

A preposterous fictional tale? Durann doesn't think so, and he has most of the hoard specimens to prove it. Their chain of custody passed directly from George to Durann's stock in trade. For more than a year, the specimens have been for sale to collectors.

Doubtless, the George hoard qualifies as a significant non-numismatic accumulation of colonial American paper money. Few such hoards have been documented. In his book, *American Coin Treasures and Hoards*,¹ Q. David Bowers states that:

Paper money hoards are scarcer than those containing coins, most probably because the archetype hoarder liked "hard money," especially if made of gold or silver. However, over the years a number of important caches of paper notes have been found, several of which are delineated here.

None of the paper money hoards mentioned by Bowers contained colonial era bills of credit. Of course, specie was in short supply or nonexistent then, which was a prime reason for issuance of the bills of credit.

Ownership of George's farm and house has passed from generation to generation since colonial times. (Reportedly the farm is now subject to an agricultural easement; the development rights

1. Wolfeboro, N.H., Bowers and Merena Galleries, Inc., 1997, p. 343.

have been sold, ensuring preservation of the property as farmland.) George believes that an ancestor farmer must have accumulated the bills of credit in the course of trade, stashing them for safe keeping under a floor board above the ceiling. But no one knows for certain how or why the bills came to be put there. The ceiling has been searched without further items coming to light.

A detailed chronological inventory of the hoard bills that remain in Durann's stock is set forth in Appendix A below. An example of one of the bills is shown in Appendix B.

A review of this inventory shows dates of issue spanning a 24-year period, from 1757 to 1781. Many of the hoard bills became technically invalid during this period. However, as Eric P. Newman has observed,²

Many bills became invalid after their specific redemption date, but excuses for late presentation were usually honored. ... Many issues circulated long beyond their due dates, and others were reissued by the treasury without legislative authority.

Therefore, the bills may have retained some value as late as 1781, despite being "stale." However, severe depreciation of all state paper money as well as Continental Currency was occurring then.

Notice the frequency of appearance of the 12 shilling denomination in the George hoard. More than twice as many 1 shilling bills of the March 25, 1776 issue were printed, as well as larger numbers of both the 18 pence and 3 shilling denominations, and equal numbers of 6 shilling bills, yet the hoard contained only a few specimens of these lower denominations. Did the depositor of the hoard sell farm produce or other goods in 12-shilling lots? Also notice that all of the 12s hoard bills are from the B plate and none from the A plate. An explanation for this anomaly is not readily evident.

For the record, photocopies of all specimens listed in this inventory have been made.

2. *The Early Paper Money of America*, 4th ed. (Iola, WI., Krause Publications, Inc., 1997), p. 18.

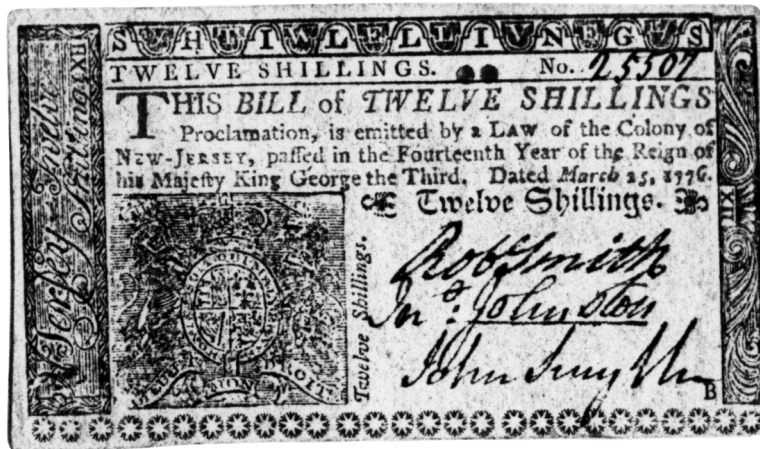
APPENDIX A

Partial List of 35 of the specimens in the George Hoard
Issued by New Jersey

<u>Specimen #</u>	<u>Denomination</u>	<u>Plate letter/serial #</u>	<u>Signers</u>
14th issue, June 14, 1757, invalid after November 14, 1762			
1	£6	— / 241	Nevill, Hartshorne, A. Johnston
15th issue, November 20, 1757, invalid after May 1, 1774			
2	£6	— / 18	Nevill, Hartshorne, A. Johnston
16th issue, May 1, 1758, invalid after May 1, 1779			
3	£6	— / 895	Nevill, Hartshorne, S. Smith
18th issue, April 10, 1759, invalid after May 1, 1768			
4	£3	A/5123	Nevill, D. Smith Jr., A. Johnston
20th issue, April 23, 1761, invalid after May 1, 1779			
5	£6	— / 607	Nevill, Rodman, S. Smith
22nd issue, December 31, 1763, invalid after December 31, 1782			
6	3s	A/3901	Jno. Johnston, Richd. Smith, Jos. Smith
7	12s	B/5594	Richd. Smith, Jno. Johnston, Skinner
25th issue, March 25, 1776, ordered to be called in by January 1, 1780, by Act of June 8, 1779			
8	3s	B/43307	Robt. Smith, Deare, Stevens
9	6s	B/74	Deare, Robt. Smith, Jos. Smith
10	6s	B/316	Deare, Robt. Smith, Jos. Smith
11	6s	B/20353	Robt. Smith, Deare, Smyth
12	6s	B/20359	Robt. Smith, Deare, Smyth
13	12s	B/371	Jno. Johnston, Robt. Smith, Jos. Smith
14	12s	B/18771	Robt. Smith, Jno. Johnston, Smyth
15	12s	B/19447	Robt. Smith, Jno. Johnston, Smyth
16	12s	B/19750	Robt. Smith, Jno. Johnston, Smyth
17	12s	B/19927	Robt. Smith, Deare, Smyth
18	12s	B/20488	Robt. Smith, Deare, Smyth
19	12s	B/20980	Robt. Smith, Deare, Smyth
20	12s	B/21055	Robt. Smith, Deare, Smyth
21	12s	B/21534	Robt. Smith, Deare, Smyth
22	12s	B/21582	Robt. Smith, Deare, Smyth
23	12s	B/21938	Robt. Smith, Jno. Johnston, Smyth
24	12s	B/21957	Robt. Smith, Jno. Johnston, Smyth
25	12s	B/22543	Robt. Smith, Jno. Johnston, Smyth
26	12s	B/22632	Robt. Smith, Jno. Johnston, Smyth
27	12s	B/22950	Robt. Smith, Jno. Johnston, Smyth
28	12s	B/23211	Robt. Smith, Jno. Johnston, Smyth
29	12s	B/24118	Robt. Smith, Deare, Smyth
30	12s	B/24363	Robt. Smith, Jno. Johnston, Smyth
31	12s	B/24430	Robt. Smith, Deare, Smyth
32	12s	B/25507	Robt. Smith, Jno. Johnston, Smyth
33	12s	B/25623	Robt. Smith, Jno. Johnston, Smyth
34	15s	— / 18106	Robt. Smith, Jno. Johnston, Smyth
27th issue, Act of January 9, 1781, redeemable by December 31, 1787			
35	1s	2513 (?)	[Illegible]

APPENDIX B

Specimen number 32: 12 shillings, 25th issue, March 25, 1776



Face of Bill: Plate B, serial number 25507. Signed by Robt. Smith, Jno. Johnston and John Smyth. [Shown actual size.] *Courtesy of Elliot P. Durann.*



Back of Bill: Printed in Burlington, NJ by Isaac Collins. Notice the nature printed sage leaf, a technique developed by Benjamin Franklin in 1739 to discourage counterfeiting. [Shown actual size.] *Courtesy of Elliot P. Durann.*

CORRECTED DATE COUNTERFEIT HALFPENCE

by

Byron K. Weston; Milesburg, PA**(TN-189)**

In CNL-111, titled *Evasion Hybrids: The Missing Link*, on sequential pages 1978-79, I indulged in a brief discussion concerning the time of manufacture of certain varieties of 1775 and 1776-dated contemporary counterfeit halfpence. This discussion was prompted and inspired by the work of Dr. Charles W. Smith. In his October 28, 1995 address before the American Numismatic Society, titled "The English George III Contemporary Counterfeit Halfpenny Series: A Statistical Study of Production and Distribution," he had speculated as to the time of production of certain varieties of these dates.

Dr. Smith's initial hypothesis was that the counterfeiters might have been hedging their bets as to whether or not the Royal Mint would continue producing genuine issue halfpence into 1776 by designing a 5 that looked like a 6. He also speculated that the counterfeiters had, at the same time, produced 1776-dated counterfeits in anticipation that the Royal Mint would continue the George III, 1st issue halfpence series.

My own thinking was in agreement with the second part of Dr. Smith's hypothesis that the counterfeiters likely produced 1776-dated counterfeits in anticipation of the series continuing. However, I questioned whether or not the counterfeiters had hedged their bets by designing a 5 that looked like a 6. I suggested that it was more likely that the counterfeiters anticipated the series would continue and that the closed loop 5 counterfeits described and illustrated by Smith and myself may have originally been dated 1776 and then altered or corrected in some way to make the 6 look more like a 5.

Although none of the illustrations used by Dr. Smith and myself lend themselves to a positive conclusion, more recent examples have come to light showing that the last digit of certain varieties were altered or corrected from a 6 into a 5. These examples were discovered by members of an on-line egroup, sponsored by the Colonial Newsletter Foundation, who deal specifically with the subject of contemporary counterfeit halfpence.

It is uncertain as to what thoughts were going through the minds of the counterfeiters in late 1775 or early 1776, but what actions they took are now better understood. Being a skeptic, I was unwilling to consider the possibility that some dies already dated 1776 were altered or corrected to make the 6 appear as a 5 on the finished "coin" until I had seen and studied high-resolution digital images of date area enlargements.

This possibility was first brought to my attention by egroup member Clement V. Schettino, who had originally e-mailed scanned images to me of his counterfeit halfpence. Unfortunately, his scanned images did not lend themselves to the study of minute detail as well as the later high-resolution images, so I wasn't willing to concede the correctness of his suggestion at that time.

In the interim, I also had the opportunity to personally inspect several specimens from the collection of fellow egroup member Ray Turcotte. Among the specimens of this burgeoning collection I noticed a peculiar 1775-dated counterfeit halfpenny with the top part of the 5 overlapping the exergue line. Perhaps thinking out loud, I casually mentioned to Ray that this may be an altered 6. The lower part of the date was off the edge of the coin making the last numeral

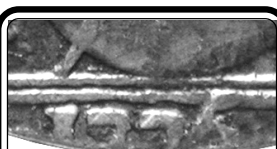


Figure 1: Top horizontal stroke of the 5 overlapping and extending above the exergue line.



Figure 2: Remnants of a 6 showing under the 5.



Figure 3: Another example of remnants of a 6 showing under the 5.



Figure 4: Partial strong impression of a 6 extending below the vertical stroke of a 5.

indistinct. However, what was visible of the lower part of the 5 suggested a partial or perhaps entirely closed loop. (See Figure 1.)

Once high-resolution digital images of his coins became available, Clem explained that he thought the area containing the 6 on the reverse die may have been lapped down by the counterfeiters, bringing the surface of the die as close to the depth of the 6 as reasonably possible without totally distorting the die. Then a 5 was punched or engraved, covering as much of the area of the 6 as possible, leaving the 5 substantially prouder than any remnants of the 6 still on the die. Studying the date area enlargement, Clem's explanation did seem to make sense to me as there were telltale remnants of a 6 visible connecting the tail of the 5 with its upper half, as well as the tip of the 6 completely visible above the 5. The area above the 5 was perhaps not lapped as heavily because of its proximity to the exergue line. (See Figure 2.) Clem also made mention of another like example that he had come across and that he would like to send digital images to me as soon as they were available. (See Figure 3.)

I once again contacted Ray Turcotte asking if he would mind sending his specimen to the same photographer for images and date area enlargements. Ray informed me that he had also come up with other specimens with the same suspect characteristics as his original coin. I asked him if he would mind sending those along as well, to which Ray agreed. Although several of these additional specimens proved to be inconclusive, another specimen with nearly the exact same characteristics as his first coin turned up in this group. This particular specimen also had the top part of the 5 overlapping the exergue line, suggesting that it was added to the top of a 6, as well a partial strong impression going down from the top part of the 5 towards its tail. (See Figure 4.)

I now began researching the egroup image files to see if any of the known 1776-dated specimens shared characteristics with these suspect corrected date pieces. Interestingly, two varieties of this date turned up that did seem to share device, letter and number punches, as well as overall design similarities with Clem's and Ray's coins. While one 1776-dated variety was very similar to that of Clem's

coins, the other 1776-dated variety was similar to that of Ray's coins. Even more interesting, both of these groups of coins shared similar characteristics between themselves, especially in their letter punches, perhaps suggesting that they all came from a common source. (See the full coin image comparisons in Figure 5.) These design style similarities also compare favorably with a family of counterfeits first explored by Mike Ringo in *CNL*-100, sequential pages 1515–20, where it was suggested that several counterfeit British-made halfpence were linked with the Georgivs Triumpho token and the Crosby 1-A, 1783 Nova Constellatio copper.

The subject corrected date halfpence were likely produced later in the year of 1776 after the counterfeiters realized that no regal issues bearing the date of 1776 would be produced at the Royal Mint. Also, the fact that these specimens appear to be linked to other groups of counterfeit halfpence and tokens suggests that there were several individuals involved in their manufacture and that the operation probably spanned several years. Research is continuing into these groups

or families of halfpence. Hopefully, additional information will be gleaned allowing a still better understanding of these highly interesting disks of copper that found their way to America and into the pockets of our forefathers.

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1st 1776-dated Variety



2nd 1776-dated Variety



Figure 2 Halfpenny



Figure 1 Halfpenny



Figure 3 Halfpenny



Figure 4 Halfpenny

Figure 5: Shown above are full images of the halfpence whose date areas are shown on the preceding page along with two different 1776-dated halfpennies. Note the similarities of the corrected date halfpence to the 1776-dated halfpenny directly above them. [The images are shown slightly larger than the actual coin size.]